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ABSTRACT

Provided in the instructional syllabus developed by the National/State Leadership Training Institute on the Gifted and Talented are a rationale for the identification of gifted students, suggested identification procedures, and examples of materials used by various school districts. It is noted that the Stanford-Binet appears to be the best single identification instrument currently available, that identification of the disadvantaged gifted requires special emphasis, and that an absolute criterion for denoting giftedness is not only legitimate but necessary to identify those so advanced that they require special attention beyond the usual school provisions. Given are a definition of giftedness and a rationale for identification which includes group screening and individual identification and case study. Advantages and limitations of the following screening measures are described: teacher nomination, group intelligence and achievement tests, nomination by others, nomination by peers, parent nomination, pupil products, student expressions of values and ideals, the autobiography, multiple screening measures and abbreviated tests, creativity tests, and judgments of creativity by experts. Considered separately are steps for successful identification of the gifted and talented among the disadvantaged population. A successful procedure within the total population is seen to include early identification, continuing search, and use of multiple resource materials. (DB)

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The Identification of the Gifted and Talented

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ON THE GIFTED AND THE TALENTED

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The Identification of the Gifted and Talented

An Instructional Syllabus for the National Summer Leadership Training Institute on the Education of the Gifted and the Talented

by
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OFFICE OF THE VENTURA COUNTY SUPERINTENDENT OF SCHOOLS
Ventura, California

June, 1974

PREFACE

This instructional syllabus deals with one aspect of special education for the gifted and the talented. While people frequently complain that no one listens, this publication is the result of a great deal of listening. From August through December, 1972, the National/State Leadership Training Institute on the Gifted and the Talented convened educators from different areas of the Nation to discuss their needs to improve educational opportunities for the gifted and the talented. Suggestions from these area needs-assessment meetings were analyzed to identify specific needs which demand priority action. Participants consistently expressed two major needs: (1) more effective identification procedures and (2) appropriate programs. This syllabus deals with identification. The terms "gifted and talented" are not mutually exclusive. A truly talented person must have high ability, and a gifted person may be assumed to have talent, or potential for talent, in some area. Because repetition of the terms "gifted and talented" is cumbersome, the word "gifted" is used as a generic term. Its use should be understood to include gifted and talented.

This syllabus presents a rationale for the identification of gifted students, suggests appropriate identification procedures, and gives examples of materials used by various school districts. In addition, it contains research findings germane to effective identification and evaluations of authorities in the field. Special attention is given to identification of economically disadvantaged children and those from different cultural backgrounds. Hopefully this publication will spur some systematic efforts to improve both the identification and the education of gifted children.

Note: Some of the material may be of value for purposes other than identification, such as inservice education for school personnel and parents. Readers should feel free to reproduce or adapt any section for such purposes, with appropriate credit to the author and sponsoring agency.

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A FRAME OF REFERENCE

This document introduces a number of ideas: they deal with abilities identified, the timing and scope of identification, the application of knowledge from identification, and the question of absolute versus relative criteria.

The reader will note that a case is made for the use of the Stanford-Binet as the best identification instrument currently available. The limitations of this and other instruments are recognized, and the frequent criticism of this instrument and others as heavily loaded with verbal factors is discussed in several sections in the text. Yet, it is important to keep in mind that verbal ability is crucial in the thinking process, in ability to solve problems, and that verbal ability itself is not unidimensional.

Verbal ability extends into all areas of human learning. It is no exaggeration to say that human progress depends largely on this ability and that the development of human societies in aesthetic, social, philosophic, scientific, moral, and political areas would not take place without it. Verbal skills at high levels are vital to human thought and ideas, indeed, and those who refer to "more verbal ability" as a unitary concept probably have not considered its true scope.

Abilities do not appear in isolation; people who perform well on tests such as the Stanford-Binet also tend to have many other abilities and talents that do not lend themselves as readily to measurement in a testing situation. The gifted as a group possess many

abilities, interests, and talents which are complex and advanced far beyond the ordinary. The skills and potential of this group present a never-ending challenge to educators, for improved educational provisions result in student advancements which extend rather than reduce this challenge. In other words, excellent programs increase the deviation of the gifted from the average and increase as well their needs for special provisions.

This document stresses the importance of early identification of the gifted. This is of particular importance for a population which demonstrates unusually advanced aptitude and commitment to learning and production. Much has been written about the importance of early identification; yet many school systems still do not identify the gifted until they are in the upper elementary grades or beyond. Such policies are made in the name of economy, but the result is that thousands of gifted children who enter school with high motivation and great anticipation experience frustration and boredom and eventually come to regard school as dull and uninteresting. Dropout and disenchantment with learning are the result, and the presumed economy turns into waste. If choices must be made, it is more economical to identify gifted children in the early grades. These children are in school longer, and the waste of underachievement can be avoided or at least reduced.

Complete and continuous identification is emphasized in many sections of this document. People developing programs for the gifted in the various States are urged to improve constantly the skills

of personnel in the recognition of potential. For instance, discussions may deal with the observed tendency of teachers to nominate achievers, clean, compliant girls rather than rebellious boys, or the tendency to stereotype boys and girls and, thus, to discourage girls with readily obvious mathematical or scientific aptitude or boys who are talented writers from pursuing their real interests. The true value in identification is to understand and nurture abilities.

The problems of the disadvantaged also merit close attention. When absolute numbers are considered, the greater potential in America rests in the lower and the lower-middle working class rather than in the relatively small numbers of economically privileged, even though higher proportions of advanced ability may be expected among the privileged. The prevailing belief in many communities that giftedness is not their concern because of social and economic problems is indefensible and should be counteracted energetically. Indeed, if social advancement is the goal of education, the gifted in the less privileged segments of society must be found and educated. Unless this is done, the underprivileged gifted will lose their right to an adequate education. It is not that emphasis should be shifted from one group to another; instead, identification should expand to the entire population.

Abilities should be identified not only in terms of IQ but also by descriptions of actual performance, special skills and talents so that teachers can offer meaningful education. The 163

IQ of the first grader in the Case Study (p. 87) says something about this child; however, his mental age of 11-6 or sixth-grade equivalent and the various abilities the child demonstrated at junior high level mean more, as do the teachers' descriptions of his advanced reading interest and skills, his remarkable ability in mathematics, his extensive interests and hobbies, and his specific experimental interests brought on by reading in an adult magazine of studies in pre-natal communication. As such information unfolds, the inadequacy of the usual first-grade curriculum is apparent.

A final introductory point to be made in considering identification is that an absolute criterion for denoting giftedness is legitimate. This population is unlike the handicapped in the fact that very few parents resist the notion that their offspring have high abilities. It is true that the divergence of the gifted rests in degree rather than in kind, but the fact that individual differences exist should be acknowledged rather than denied. Gifted children are able to go beyond the usual performance of their peers to unusually high levels of abstraction and generalization. They sense the significance of problems and solve problems of which others may not even be aware. They deal with concepts and ideas and produce creatively at greatly advanced levels and should be encouraged to do so. But, in order to meet the complex and unique challenge of the gifted, it is important to focus on those with truly outstanding abilities and exceptional needs. The temptation to include large segments of the population should be resisted because it results in

diminished attention to those who need special provisions most. The gifted child, in other words, can be served poorly in a curriculum designed for the average of the upper 20%. For this reason and others, the gifted are defined as a group so advanced that they require special attention beyond the usual school provisions.

DEFINITION

In planning identification programs, it is necessary to define giftedness. This must be done at the local level, and definitions will vary from community to community, depending on what levels of ability and special talents are to be included, on allowances to be made for environmental deprivations, on the number of children to be served, and on other factors. The definition agreed upon by a majority of an advisory panel to the U.S. Office of Education provides general guidelines:

> Gifted and talented children are those identified by professionally qualified persons who, by virtue of outstanding abilities, are capable of high performance. These are children who require differentiated educational programs and/or services beyond those normally provided by the regular school program in order to realize their contribution to self and society (38).

The abilities, either potential or demonstrated, to be included are general intellectual ability, specific academic aptitude, creative or productive thinking, leadership ability, ability in visual and performing arts, and psychomotor ability. This definition includes approximately 3 to 5 percent of the school population.

More than 80 percent of 204 experts who were polled for their reactions to the above definition agreed that the category "gifted and talented" should include those with high general intellectual ability, those who manifest creative or productive thinking, those with specific academic aptitude, and/or those with ability in visual or performing arts. They also recommended inclusion of those with underdeveloped potential. About half of the

experts agreed that those who demonstrate social adeptness and psychomotor ability should be included (38).

Any definition of the gifted should result in identification of those children who need special educational provisions in order to learn and to use their capacities properly.

THE IMPORTANCE OF IDENTIFICATION

The progress of society is dependent in large measure on the accomplishments of its most capable members. The society which fails to nurture the highest capabilities and talents of its youth fails in its obligations to them and to itself. The affirmation that every person should be afforded an opportunity to develop his full potential has been made so frequently throughout the history of the United States that it has become a cliché; yet we are far from accomplishing such a goal.

The values to the gifted individual and to his society which accrue from identification and subsequent educational opportunities are well recognized. The accomplishments of the gifted exceed those of like numbers from the general population, both in quality and quantity. Examples of distinguished performance can be documented from the time of the founding of the Republic and cut across many fields. We are all better off because of the contributions of such people as Rachel Carson, Ralph Bunche, Jonas Salk, Thomas Jefferson, and Mary Bethune. They all had a lasting impact on education, ethics, government, and on life itself. Vast improvements are easily ascribable to the work of a Salk or an Edison. The dollar value of their work is impossible to estimate, but it is obvious that far more than economic benefits accrue from their output. The more than 1,000 inventions of Edison, for instance, resulted in the phonograph, electric lamp, dictaphone, mimeograph,

electric locomotive, electronic vote recorders, and countless other products taken for granted in modern life.

All gifted individuals do not approach the prolific output of an Edison, but their impact is nevertheless well beyond that of the average population. In a current-day gifted population, for example, one person made more than 100 research contributions in pharmacology while others contributed to the development of medicine, atomic energy, psychological knowledge, wrote prize-winning literature, provided political leadership, and were granted hundreds of patents. Their work in the arts, the humanities, science, literature, and the social sciences is notable both for its quantity and scope (75).

The advantage to all in the identification and full development of special abilities and talents of the gifted should be obvious; even from a purely selfish standpoint the public should insist on this as a major educational priority. It seems, as well, that educators would be aware not only of potential future contributions from this group but also of the benefits to the individual and the improved status of the educational system. Yet, what is the case?

In all parts of the country vast numbers of the gifted have remained unidentified and unrecognized throughout their school careers. Even in States with the most highly developed programs, less than half of the expected number are in programs. No State provides for a majority of its gifted.

The recent report on the gifted and talented by the United States Office of Education (38) presented some startling figures; it pointed out that 57.5 percent of elementary and secondary school

principals throughout the country stated that they have no gifted children in their schools, that at least three fourths of gifted and talented children receive no special attention of any kind, and that the neglect of this population is at least double that of any handicapped population. More recent figures gathered by the Bureau for the Gifted and Talented of the Office of Education, as yet unpublished, show that only thirteen percent of an estimated 2,580,000 gifted and talented children are being served. No gifted children are being served in 21 States, including eastern and mid-western States with dense populations and concentrated wealth. The total child population of the States with no service whatsoever is over nine million, with an estimated 484,400 gifted and talented children.

The final results of this neglect cannot be documented directly. One can only speculate on what the lives of some gifted persons who are maladjusted, unproductive, or hostile toward society might have been under more favorable circumstances. One may also wonder about gifted people who have damaged others and themselves through lack of personal or political ethics.

The neglect of the gifted is obvious, but it is difficult to justify. When reasons are given they often include the following: Concern about the inadequacy of existing measures; concern about the stability of measured intelligence; concern about costs; competing and more obvious priorities; and fear of establishing an "elite." Fear about the inadequacy of existing measures has not affected

identification of the handicapped until lately; even then the criticism has been directed more toward inappropriate use and interpretation of tests with culturally different children than toward the measures themselves. Rarely has the question about incomplete measurement of potential abilities been raised, as it has been in the case of the gifted, improbable as that goal might be.

The fear about instability of measured intelligence is based on differences in results obtained from infant motor tests and school-age verbal tests, on differences between primary and secondary grade tests, and on IQ variations found in longitudinal studies of various groups. The often recommended delay in testing mentally handicapped children and the unreliable results of group tests in the early years are used as arguments against early identification of gifted children. The fact that the young gifted child has reached a mental age several years in advance of his chronological age makes such arguments less valid; in fact, valid individual testing of potentially gifted children is possible from the kindergarten level onward. Studies cited later in this document (39, 41, 63, 90) give ample evidence that gifted children can be identified and educated differentially with success during their earliest years. No sound evidence to the contrary is available.

Concern about the costs of identification is indicative primarily of erroneous values. Costs for complete identification and case study of a gifted child are far lower than those of the

handicapped. This is because of the limited clinical and medical aspects, as well as the ease with which information is obtained from or provided by the gifted child, his parents, and others. Costs are slight when weighed against the underachievement, boredom, withdrawal from school, negation of talents, and personal problems faced by those gifted children who are not identified. They are especially minimal when the resultant social loss is considered.

The problem of competing priorities is complex. No one interested in the development of various human capacities would deny the right of all children to an adequate education. Yet priority is commonly given to those problems which are the most obvious and demanding. Thus, attention goes first to remedial problems, and intensive efforts are made to help children overcome their deficits. Because the gifted often adjust to the usual school expectations and can achieve easily without using their true capabilities, attention to their needs is postponed. The result is that the needs of children who are especially capable of outstanding achievement are the last to receive meaningful attention.

Literature on the gifted, from the earliest days to the present, contains occasional statements against identification and special educational provisions in order to prevent the establishment of an "elite." The idea is that children will develop exaggerated opinions about their worth, will look down on others, or will behave in a generally obnoxious fashion. Such problems might occur in <u>any</u> poorly planned program, whether for the gifted or not. When well-planned provisions have followed identification, the contrary is true.

Research has shown that adequate programs result not only in improved academic performance but also in better attitudes toward self and others, in improved social relationships, and in a reduction of behavior problems (2, 19, 39). If gifted children are allowed to function and to achieve, if they are no longer made to feel odd or inferior, and if they are not forced to deny their ability, they improve in their sense of well-being and in their ability to relate well to others (39).

Common beliefs on identification and program planning must change. We have to realize that the gifted are not confined to wealthy suburbia. They are found in all populations and in all economic circumstances, and the failure to identify them is most often due to a failure to seek them by proper means. They will not identify themselves. On the contrary, they are likely to take all necessary measures to resemble others and to minimize their own abilities. No child, including the gifted, wants to be singled out as "different."

The assumption that the gifted can survive satisfactorily without identification and special provisions is incorrect. Several major studies have shown that significant numbers of able students drop out of secondary school, the majority of them girls. The number of minority children in higher education is still very small. Nearly 20 percent of the most capable students fail to enter college, although all of them probably could succeed with little effort (15, 19, 38). No doubt a major factor in their dis-

enchantment with education is a cumulative frustration with irrelevant school content. The gifted child rarely experiences an education appropriate to his abilities and achievement level, and as Roe has pointed out, failure to satisfy cognitive needs can affect adversely the psychological well-being of the individual (66). The words of Hunt present the challenge:

> It is highly unlikely that any society has developed a system of child-rearing and education that maximizes the potential of the individuals who compose it. Probably no individual has ever lived whose full potential for happy, intellectual interest and growth has been achieved (28).

Terman regarded the gifted as the most retarded group in education when mental age and chronological age are related to their actual school experiences. In view of the continuing failure to provide for any appreciable numbers of the gifted, his comment is probably still true.

The basic needs of the gifted for understanding, self-esteem, a sense of worthy accomplishment, independence, love, and self-actualization are the same as those of other children. If these needs are not met for the gifted, they too suffer problems of anxiety and insecurity. The inconsistencies which they encounter in values, in standards, and in concepts of behavior and accomplishment create special problems for them. Unless their different interests, goals, and modes of operation are accepted, they will have difficulties. The differences between the gifted and their chronological age group are often great, not only in academic but also in psychological areas. The higher the capability, the greater the problems of

adjustment. Highly gifted children tend to feel lonely, and they receive little from ordinary schools. Gifted children have special needs, which are challenging and complex; the challenge of meeting those needs is totally constructive, and the promise of the population, limitless.

SCREENING AND IDENTIFICATION

Identification of the gifted should be done as a series of steps. The first step is screening through the use of multiple methods; the second is identification and case study. Screening includes some or all of the following: Group tests of intelligence and achievement, creativity tests, teacher nominations, parent information, pupil data, pupil products, and teacher and parent notations on traits and behavior which may or may not be positive. Identification involves individual testing and case study and should be followed by educational plans. The next section discusses screening methods briefly and includes appropriate sample forms. The reader should regard the forms as a necessarily limited selection, to be adapted for local needs. Brief comments and information on the assets and limitations of various methods are included.

Identification ideally includes all of the information which can be gathered about a given pupil. Not all school systems can support the costs of screening, individual testing, and case studies. However, much information on potentially gifted students can be gathered at very little cost. Some suggestions are made in the next section.

SCREENING MEASURES--ASSETS AND LIMITATIONS

Teacher Nomination

Nomination by teachers is one of the most widely used and recommended means for identifying potentially gifted pupils, yet the method is of limited usefulness. In an excellent summary of various studies on the ability of teachers to nominate the gifted, Gallagher (19) found that none of the studies he reviewed showed the teachers to good advantage. He suggested that teachers might do better in listing their children in rank order because of the variance in prediction efficiency from one teacher to another. The problem of teacher nomination also is evident in the over-nomination of either boys or girls by some individuals.

In a study of various means for screening and identifying gifted kindergarten children, Walton found teacher judgments alone would have resulted in referral of only one in five children later identified as gifted on the Stanford-Binet (87). In combination with other means the success of teacher nomination increased sharply, but of the various means used, teacher judgment proved the least effective. An analysis of the teacher check list which Walton devised showed that teachers apparently did not consider the following questions:

1. Who asks many questions, is interested in a wide range of things?

2. Who is highly imaginative?

3. Who is original, uses good but unusual methods or ideas?

Jacobs found that kindergarten teachers only nominated 10 percent of children who had been identified as gifted. Parents proved to be far more accurate (30).

Pegnato and Birch, in a study at junior high level, also found teacher nomination less effective and efficient than other screening means (51). Their study showed that teachers overlooked fifty gifted children, misidentified 113, and correctly identified 41 pupils in a group of 154. Even when nominating the highly gifted, teachers miss 28 percent of those later identified, according to Barbe and Horn (2).

Why, then, should the judgment of teachers be part of the screening process? Several reasons are offered: Teacher participation in study and observation of characteristics of the gifted is valuable inservice training; the judgment of teachers, when combined with other screening methods, increases the likelihood that children will not be overlooked for referral; although it would be difficult to prove, participation in nomination and selection of candidates for testing should increase interest in the gifted and increase teachers' awareness of gifted children and their educational needs.

Rating scales used by teachers to identify giftedness generally have been based on lists of characteristics. One such list which has been widely used was developed for use in the

California Study, Educational Programs for Gifted Pupils (39). It provided a frame of reference for considering not only traits of the gifted, but also some of their problems. The list can also be used for productive inservice discussion.

SOME LEARNING CHARACTERISTICS OF GIFTED CHILDREN

May V. Seagoe
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Characteristics	Concomitant Problems
1. Keen power of observation; naive receptivity; sense of the significant; willingness to examine the unusual	1. Possible gullibility
2. Power of abstraction, conceptualization, synthesis; interest in inductive learning and problem solving; pleasure in intellectual activity	2. Occasional resistance to direction; rejection or remission of detail
3. Interest in cause-effect relations, ability to see relationships; interest in applying concepts; love of truth	3. Difficulty in accepting the illogical
4. Liking for structure and order; liking for consistency, as in value systems, number systems, clocks, calendars	4. Invention of own systems, sometimes conflicting
5. Retentiveness	5. Dislike for routine and drill; need for early mastery of foundation skills
6. Verbal proficiency; large vocabulary; facility in expression; interest in reading; breadth of information in advanced areas	6. Need for specialized reading vocabulary early; parent resistance to reading; escape into verbalism
7. Questioning attitude, intellectual curiosity, inquisitive mind; intrinsic motivation	7. Lack of early home or school stimulation
8. Power of critical thinking; skepticism, evaluative testing; self-criticism and self-checking	8. Critical attitude toward others; discouragement from self-criticism
9. Creativeness and inventiveness; liking for new ways of doing things; interest in creating, brainstorming, free-wheeling	9. Rejection of the known; need to invent for oneself
10. Power of concentration; intense attention that excludes all else; long attention span	10. Resistance to interruption

Characteristics	Concomitant Problems
11. Persistent, goal-directed behavior	11. Stubbornness
12. Sensitivity, intuitiveness, empathy for others; need for emotional support and a sympathetic attitude	12. Need for success and recognition; sensitivity to criticism; vulnerability to peer group rejection
13. High energy, alertness, eagerness; periods of intense voluntary effort preceding invention	13. Frustration with inactivity and absence of progress
14. Independence in work and study; preference for individualized work; self-reliance; need for freedom of movement and action	14. Parent and peer group pressures and non-conformity; problems of rejection and rebellion
15. Versatility and virtuosity; diversity of interests and abilities; many hobbies; proficiency in art forms such as music and drawing	15. Lack of homogeneity in group work; need for flexibility and individualization; need for help in exploring and developing interests; need to build basic competencies in major interests
16. Friendliness and outgoingness	16. Need for peer group relations in many types of groups; problems in developing social leadership

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A recent list by Lucito (37) compiled from summaries by Torrance, Gallagher, and Stein portrays traits generally associated with the creative.

THE CREATIVE
Compiled by Leonard Lucito

1. View the work with extra wonder and see magic in it;

2. Are learning by experimenting, manipulating objects in many ways, and using stories to exercise their imaginations at preschool age;

3. Are able to be conforming or nonconforming as the situation demands;

4. Try to find answers to their question in their way;

5. Have extremely long attention spans and the ability to pursue an activity in which they are interested for extra long periods of time;

6. Can tolerate disorder and ambiguity;

7. Are able to organize themselves and ideas;

8. Tend to see familiar things and situations in unusual ways and in greater depth;

9. Often prefer to learn by creative ways rather than by being told by an authority;

10. Seem to learn considerably from fantasy as it aids in solving their problems of development;

11. Display a positive self-image;

12. Have an attraction toward the unconventional and toward complexity;

13. Seem to rely more on their own evaluations than on others;

14. Come from family backgrounds characterized by lack of overdependence of children on parents and stress of conformity by parents; strong feelings are expressed in the family; both fathers and mothers relate strongly and positively to the child even though the mother is ambivalent in her mothering feelings; more often than not the most creative child is the older sibling; fathers are usually engaged in occupations allowing for autonomy and independence;

15. Build a reputation for having wild or silly ideas, particularly the boys;

16. Display humor, playfulness, and relaxation in their creative products;

17. Wish to work alone at times;

18. Are high academic achievers provided they have a minimum IQ score of around 120;

19. Can integrate opposing impulses such as destructiveness and constructiveness;

20. Select fewer conventional occupations (e.g., lawyer, doctor, professor) and select more unconventional ones (e.g., adventurer, inventor, writer).

Lucito added traits from a study by Schaefer (1970) in which he

describes 10 highly creative girls at the high school level. Schaefer's results indicated:

1. They cultivated one or two close friends rather than a wide circle of acquaintances;
2. They were open to a wide range of fantasy feelings;
3. They identified with parents but appeared emotionally independent;
4. Friends, relatives, and teachers provided models of creative behavior, particularly their fathers;
5. Their parents were non-controlling with strong cultural intellectual interests;
6. They engaged frequently in creative activities and were often rewarded for such behavior;
7. They learned to read at an early age and still are avid readers;
8. High academic success was achieved with little apparent effort.

A third guide to enable teachers to identify gifted children better is from a 1971 California State Department of Education publication (54), Education of Mentally Gifted Minors, developed by Plowman, Rice, Sato, and others.

SOME GENERAL CHARACTERISTICS OF GIFTED CHILDREN

Observant teachers can spot unique and specialized responses, both in the classroom and on the playground, that differentiate the gifted child from the rest of his classmates. He is likely to possess the following abilities:

1. To read earlier and with greater comprehension of nuances in the language. Kindergarten teachers need to discover which few of their pupils read books and already have library cards.

2. To learn basic skills better. The gifted child usually learns them faster and needs less practice. Overlearning can lead to boredom, cessation of motivation, and the commission of careless errors.

3. To make abstractions when other children at the same age level cannot.

4. To delve into some interests beyond the usual limitations of childhood.

5. To comprehend, with almost nonverbal cues, implications which other children need to have "spelled out" for them. The gifted gouge out a greater amount of information and do so faster.

6. To take direction independently at an earlier stage in life and to assume responsibility more naturally.

7. To maintain much longer concentration periods. Gifted young people become immersed with the facts and content of knowledge.

8. To express thoughts readily and to communicate with clarity in one or more areas of talent, whether verbal, numerical, aptitudinal, or affective.

9. To read widely, quickly, and intensely in one subject or in many areas.

10. To expend seemingly limitless energy.

11. To manifest creative and original verbal or motor responses.

12. To demonstrate a more complex processing of information than the average child of the same age.

13. To respond and relate well to peers, parents, teachers, and adults who likewise function easily in the higher-level thinking processes.

14. To have many projects going, particularly at home, so that the talented child is either busily occupied or looking for something to do.

15. To assume leadership roles because the innate sense of justice that is often noticeable in gifted children and youth gives them strength to which other young people respond.

A fourth and final sample comes from the Cranston, Rhode

Island, Title III Program.

TRAITS COMMON TO INTELLECTUALLY GIFTED CHILDREN
(Cranston, Rhode Island,
Title III, ESEA Program
Julius Briet, Director)

Displays a great curiosity about objects, situations, or events. Has the capacity to look into things and be puzzled; gets involved with many exploratory type activities; is interested in a wide range of things.

Is a self-initiated student, usually needing little help in knowing what to do; starts on his own; pursues individual interests and seeks own direction.

Exhibits originality in oral and written expression. Consistently gives unusual, clever, unique responses or ideas away from the cliché or stereotype.

Has unusual talent to express himself in the arts; i.e., music, dance, drama, drawing, play activities, and/or artistic expression.

Has the ability to generate many alternatives. Seeks many directions and is flexible in thinking by going at right angles to the main stream of thought in the classroom.

Is perceptually open to his environment. Uses all of his senses to be aware of things around him; keenly observant and alert to things that are done as well as things that are not done.

Displays a willingness for complexity. Thrives on problem situations; selects a more difficult response, solution, or problem over the easier; seeks complex asymmetrical forms compared to symmetrical forms; has a preference for "digging into" things.

Has the capacity to use knowledge and information other than to memorize, store, and recall. Seeks new associations among items of information; combines elements of materials or knowledge in a unique fashion.

Shows superior judgment in evaluating things. Reasons things out; seeks logical answers; can see implications and consequences; makes decisions easily.

Is a good elaborator. Produces a variety of detailed steps; continually adds on to ideas, responses, or solutions; loves to embellish materials and ideas.

Is a good guesser. Is able to hypothesize; is full of wonder about things; is a risk taker; makes good educated guesses.

Learns rapidly, easily, and efficiently.

Has the ability to see relationships among unrelated facts, information, or concepts.

Uses a lot of common sense; seeks the most practical approach.

Retains and uses information which has been heard or read.

Uses a large number of words easily and accurately.

Asks many questions of a provocative nature; inquisitive about knowing why instead of what; has the capacity to inquire.

It is interesting to compare the four lists and note the similarities and differences. They have been included as samples of comprehensive lists in existence so that those who plan to develop modified lists will have more than one resource at hand for reference.

From lists of characteristics and from research, check lists for teacher identification have been formulated. The following list, developed by a consultant team in Los Angeles County, was used for screening in the California state study (39) and provided an opportunity for teachers to list, under guidance, the pupils who exhibited at least three of the traits mentioned.

KINDERGARTEN CHECK LIST*

1. County_____ 3. School_____

2. District_____ 4. Teacher_____

When compared with other children in the kindergarten, which of your pupils possess, to a marked degree, some of the following characteristics? Be particularly observant of the youngest children in the class. Do not exclude any child because of a speech defect.

1. Has unusually good vocabulary
2. Has ideas which are often very original in one or more areas (i.e., block play, free activities, art, rhythms, sharing)
3. Is alert, keenly observant; responds quickly
4. Has an unusually good memory
5. Has a long attention span
6. Recognizes, on his own, some words in books on the browsing table
7. Uses longer sentences
8. Reasons things out, thinks clearly, recognizes relationships, comprehends meanings
9. Is curious about many activities and places outside immediate environment and/or experience
10. Is a leader in several kinds of activities. Is able to influence others to work toward desirable goals
11. Has outstanding talent in a special area(s) such as art, music, rhythms, dramatics (indicate area(s) of talent)

_____

_____

If you have any pupils who exhibit at least three of the above characteristics, please list their names below. Following each name, list the number of all characteristics that fit the pupil:

Pupil's Name	Characteristics (Indicate by number)
1._____	_____
2._____	_____

_____

*Form developed by Corabelle Clark and Eleanor Dyer, Compton; Lyman Peterson, Paramount; Marguret Lund, Manhattan Beach; Beatrice Lantz, Division of Research and Guidance, Office of Los Angeles County Superintendent of Schools.

3. _____ _____

4. _____ _____

5. _____ _____

6. _____ _____

Comments: _____ _____

Another list, not limited to kindergarten, appears below. It combines the items found most important by Walton with traits of creative youth identified by Barron and includes two items for those deemed artistic and/or musical. Teachers who used this check list frequently commented that the names of the same children appeared again and again opposite the various items. Teachers are free to nominate any number of children from a class; this should increase the likelihood of finding the gifted.

Will you please take a few minutes to write in the first and last names of one or two children (or more) whose names come into your mind first as you look at the terms below? This should be done as free association, very rapidly. You need not fill every space, and to save time, if you list a child more than once, use his first name and last initial to save time after the first listing. Thank you very much.

1. Learns easily _____

2. Original, imaginative, creative _____

3. Widely informed _____

4. Persistent, resourceful, self directed _____

5. Common sense _____

6. Inquisitive, skeptical _____

7. Informed in unusual areas _____

8. Artistic_____

9. Outstanding vocabulary, verbally fluent_____

10. Musical_____

11. Independent worker, shows initiative_____

12. Good judgment, logical_____

13. Flexible, open_____

14. Versatile, many interests_____

15. Shows unusual insights_____

16. Shows high level of sensitivity, empathy_____

17. Has excellent sense of humor_____

One of the earliest and most popular forms for identification of potentially gifted children was developed by Kough and DeHaan (36). This form, which encompasses many of the abilities of the academically talented (upper 15 percent) as well as the gifted, has been widely used and adapted for the gifted. The following form, using the Kough and DeHaan items as a base, has incorporated additional items to promote accurate referrals.

DAVIS JOINT UNIFIED SCHOOL DISTRICT MENTALLY GIFTED MINOR REFERRAL

Student's Name_____ Date_____

School_____ Teacher_____

1. What makes this child seem special to you?_____

_____

_____

2. Are you aware of any experiences of this pupil suggesting he has special gifts or talents (early reading, creations, activities, leadership)? Describe in specific terms.

_____

_____

In the following items, check the column which best describes the child's functioning:

	Rarely	Occasionally	Often	Most of the time
a. Learns rapidly and easily.	_____	_____	_____	_____
b. Thinks clearly, recognizes implied relationships, comprehends meanings.	_____	_____	_____	_____
c. Reads above grade level.	_____	_____	_____	_____
d. Retains what he has heard or read without appearing to need much rote or drill.	_____	_____	_____	_____
e. Has large vocabulary.	_____	_____	_____	_____
f. Is independent, individualistic, self-sufficient.	_____	_____	_____	_____
g. Is curious, investigative.	_____	_____	_____	_____
h. Asks penetrating, searching questions.	_____	_____	_____	_____
i. Has long attention span.	_____	_____	_____	_____
j. Produces original products or ideas.	_____	_____	_____	_____
k. Prefers complex ideas.	_____	_____	_____	_____

An unusually thoughtful scale for nominating and rating pupils has been developed by Renzulli, Hartman, and Callahan (61). It was

compiled from research on traits of gifted children. Items were selected which appeared in at least three sources. They are grouped in the areas of Learning, Motivation, Creativity, and Leadership. Validation studies indicate satisfactory inter-judge reliability; comparisons of the Learning and Motivation scales with standardized tests of intelligence and learning and show them to correlate fairly well with group tests. The Creativity Scale compares favorably with the verbal subtests of the Torrance Tests of Creative Thinking, but a low nonsignificant relationship was found between the Creativity Scale and nonverbal items of the Torrance Tests. Thus, the rating scale apparently is more useful in identifying students in verbal aspects of creativity than in nonverbal.

Renzulli and his colleagues suggest that student ratings on the scales be analyzed separately for use in identifying and developing particular abilities. They also suggest that the scales be used as early as possible in the student's career, that they be used throughout the year, and that ratings be secured from several sources if possible.

SCALE FOR RATING BEHAVIORAL CHARACTERISTICS OF SUPERIOR STUDENTS

Joseph S. Renzulli/Robert K. Hartman

Name_____ Date_____

School_____ Grade_____ Age_____
Years Months

Teacher or person completing this form_____

How long have you known this child?_____ Months

DIRECTIONS - These scales are designed to obtain teacher estimates of a student's characteristics in the areas of learning, motivation, creativity, and leadership. The items are derived from the research literature dealing with characteristics of gifted and creative persons. It should be pointed out that a considerable amount of individual differences can be found within this population, and therefore, the profiles are likely to vary a great deal. Each item in the scales should be considered separately and should reflect the degree to which you have observed the presence or absence of each characteristic. Since the four dimensions of the instrument represent relatively different sets of behaviors, the scores obtained from the separate scales should not be summed to yield a total score. Please read the statements carefully and place an X in the appropriate place according to the following scale of values:

1. If you have seldom or never observed this characteristic.
2. If you have observed this characteristic occasionally.
3. If you have observed this characteristic to a considerable degree.
4. If you have observed this characteristic almost all of the time.

Space has been provided following each item for your comments.

SCORING - Separate scores for each of the three dimensions may be obtained as follows:

.... Add the total number of X's in each column to obtain the "Column Total."
.... Multiply the Column Total by the "Weight" for each column to obtain the "Weighted Column Total."
.... Sum the Weighted Column Totals across to obtain the "Score" for each dimension of the scale.
.... Enter the scores below.

Learning Characteristics....._____

Motivational Characteristics....._____

Creativity Characteristics....._____

Leadership Characteristics....._____

PART I: LEARNING CHARACTERISTICS

	1	2	3	4 *
1. Has unusually advanced vocabulary for age or grade level; uses terms in a meaningful way; has verbal behavior characterized by "richness" of expression, elaboration, and fluency.	___	___	___	___
2. Possesses a large storehouse of information about a variety of topics (beyond the usual interests of youngsters his age).	___	___	___	___
3. Has quick mastery and recall of factual information.	___	___	___	___
4. Has rapid insight into cause-effect relationships; tries to discover the how and why of things; asks many provocative questions (as distinct from informational or factual questions); wants to know what makes things (or people) "tick."	___	___	___	___
5. Has a ready grasp of underlying principles and can quickly make valid generalizations about events, people, or things; looks for similarities and differences in events, people, and things.	___	___	___	___

* 1--Seldom or never
2--Occasionally
3--Considerably
4--Almost always

	1	2	3	4
6. Is a keen and alert observer; usually "sees more" or "gets more" out of a story, film, etc. than others.	___	___	___	___
7. Reads a great deal on his own; usually prefers adult level books; does not avoid difficult material; may show a preference for biography, autobiography, encyclopedias, and atlases.	___	___	___	___
8. Tries to understand complicated material by separating it into its respective parts; reasons things out for himself; sees logical and common sense answers.	___	___	___	___
Column Total	___	___	___	___
Weight	1	2	3	4
Weighted Column Total	___	___	___	___
Total				___

PART II: MOTIVATIONAL CHARACTERISTICS

1. Becomes absorbed and truly involved in certain topics or problems; is persistent in seeking task completion. (It is sometimes difficult to get him to move on to another topic.)	___	___	___	___

		1	2	3	4
2.	Is easily bored with routine tasks.	___	___	___	___
3.	Needs little external motivation to follow through in work that initially excites him.	___	___	___	___
4.	Strives toward perfection; is self critical; is not easily satisfied with his own speed or products.	___	___	___	___
5.	Prefers to work independently; requires little direction from teachers.	___	___	___	___
6.	Is interested in many "adult" problems such as religion, politics, sex, race--more than usual for age level.	___	___	___	___
7.	Often is self assertive (sometimes even aggressive); stubborn in his beliefs.	___	___	___	___
8	Likes to organize and bring structure to things, people, and situations.	___	___	___	___
9.	Is quite concerned with right and wrong, good and bad; often evaluates and passes judgment on events, people, and things.	___	___	___	___
	Column Total	___	___	___	___
	Weight	1	2	3	4
	Weighted Column Total	___	___	___	___
	Total				_____

PART III: CREATIVITY CHARACTERISTICS

	1	2	3	4
1. Displays a great deal of curiosity about many things; is constantly asking questions about anything and everything.	___	___	___	___
2. Generates a large number of ideas or solutions to problems and questions; often offers unusual ("way out"), unique, clever responses.	___	___	___	___
3. Is uninhibited in expressions of opinion; is sometimes radical and spirited in disagreement; is tenacious.	___	___	___	___
4. Is a high risk taker; is adventurous and speculative.	___	___	___	___
5. Displays a good deal of intellectual playfulness; fantasizes; imagines ("I wonder what would happen if..."); manipulates ideas (i.e., changes, elaborates upon them); is often concerned with adapting, improving, and modifying institutions, objects, and systems.	___	___	___	___
6. Displays a keen sense of humor and sees humor in situations that may not appear to be humorous to others.	___	___	___	___
7. Is unusually aware of his impulses and more open to the irrational in himself (freer expression of feminine interest for boys, greater than usual amount of independence for girls); shows emotional sensitivity.	___	___	___	___
8. Is sensitive to beauty; attends to aesthetic characteristics of things.	___	___	___	___

	1	2	3	4
9. Is nonconforming; accepts disorder; is not interested in details, is individualistic; does not fear being different.	___	___	___	___
10. Criticizes constructively; is unwilling to accept authoritarian pronouncements without critical examination.	___	___	___	___
Column Total	___	___	___	___
Weight	1	2	3	4
Weighted Column Total	___	___	___	___
Total				___

PART IV: LEADERSHIP CHARACTERISTICS

1. Carries responsibility well; can be counted on to do what he has promised and usually does it well. (Baldwin, 1932; Bellingrath, 1930; Burks, 1938)	___	___	___	___
2. Is self confident with children his own age as well as adults; seems comfortable when asked to show his work to the class.	___	___	___	___
3. Seems to be well liked by his classmates.	___	___	___	___
4. Is cooperative with teacher and classmates; tends to avoid bickering and is generally easy to get along with.	___	___	___	___

		1	2	3	4
5.	Can express himself well; has good verbal facility and is usually well understood.	___	___	___	___
6.	Adapts readily to new situations; is flexible in thought and action and does not seem disturbed when the normal routing is changed.	___	___	___	___
7.	Seems to enjoy being around other people; is sociable and prefers not to be alone.	___	___	___	___
8.	Tends to dominate others when they are around; generally directs the activity in which he is involved.	___	___	___	___
9.	Participates in most social activities connected with the school; can be counted on to be there if anyone is.	___	___	___	___
10.	Excels in athletic activities; is well coordinated and enjoys all sorts of athletic games.	___	___	___	___
	Column Total	___	___	___	___
	Weight	1	2	3	4
	Weighted Column Total	___	___	___	___
	Total				___

It is generally agreed that rating scales are useful in identifying giftedness, but they should be used with full awareness of their limitations. If scales are adapted or developed for local use, they should consist of items which are clearly understood by teachers and include those qualities or traits which are readily identified in classroom situations. Items based on direct observation of behavior are far more valuable than those based on inference.

Scales should demand as little time from teachers as possible. Teachers rightfully resent taking time from child contacts to fill out forms and questionnaires which they view as unnecessarily wordy, time-consuming, or irrelevant. To help teachers understand and use scales, their content should be discussed in teacher groups. But, despite their limitations, scales should be used because they add to the likelihood that gifted children will be identified.

Group Intelligence and Achievement Tests*

Group tests of intelligence and achievement are useful in screening potentially gifted pupils, especially if used together. But

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*Because of the thousands of group tests available, specific evaluations cannot be made here. The 1972 Mental Measurements Yearbook, for example, contains reviews and evaluations of 1157 tests! People who are considering using any test, group or individual, should consult such sources as Buros' Mental Measurements Yearbook (11) for thorough evaluations by experts. Evaluations are given for tests of intelligence, creativity, talents, personality, and many other fields of interest to those dealing with the gifted. An excellent chapter on measurement of exceptional children by Newland (44) is also valuable.

group tests should be used for screening purposes only and not for final identification.

One obvious reason is the makeup of the tests. Their content is designed for the majority of pupils within certain age and grade ranges; the content suitable for the gifted, who perform at advanced levels, typically is limited to a few items. Randomly selected high school seniors who were given the Graduate Record Examination area tests when they proved to be somewhere beyond the college sophomore level on the Sequential Tests of Educational Progress, exceeded the norms for college seniors on all three area examinations and exceeded the norm for seniors who had majored in social studies on that particular test (39). The same problem occurs at all grade levels. Therefore, the usual testing program should be supplemented with advanced-level achievement tests suitable for the gifted.

The ceiling problem also occurs in group intelligence tests. Because of the limited number of advanced items, pupils must have nearly total success to be designated as gifted. It is not uncommon for a child's IQ to vary thirty points from an individual to a group test, especially at the upper levels of measured intellectual ability, as Table 1 shows (39). And when a pupil has a group test IQ of 130, his educational needs are not considered as they would be if his individual IQ of, say, 170 were known.

TABLE 1
DIFFERENCES IN SCORES BETWEEN GROUP AND INDIVIDUAL TESTS
AT VARIOUS IQ LEVELS

IQ range	Number of pupils	Algebraic difference*
160-169	6	33.833
150-159	11	18.273
140-149	11	13.909
130-139	28	10.607

The problem of using group tests except for screening purposes was stressed by Pegnato (50) in a study of the entire population of a large metropolitan junior high school. If a cutoff point of 125 on the Otis Group Test had been employed, over half of the gifted in his study would have failed to qualify, including nine whose actual scores on the Binet ranged from 146 to 161. Only 35 out of Pegnato's sample of 84 gifted pupils achieved scores on the group test of 125 or more.

An examination of the scores of the 84 individuals reveals interesting discrepancies. Out of the 84 in the group, 45 had Binet scores that were higher than their Otis scores by 20 points or more. Of these, 15 scored at least 30 points lower on the group test score.

Further evidence of the need to supplement group testing with other means of identification comes from a study by Blosser (19) of the relative usefulness of several group intelligence tests. The three tests Blosser evaluated were not very efficient and identified

*In favor of Binet. Data courtesy of California Test Bureau.

a number of students who failed to qualify on the Stanford-Binet.

A different and perhaps even more serious problem can occur. Through examination of the group test IQs of a group of 332 gifted students in the California study (39), it was found that nearly one fourth of the group would have been eliminated if a group test IQ of 125 had been the criterion for inclusion; if 130 had been the criterion, slightly over half would have been eliminated. Examination of Table 2 shows not only that many would have failed to qualify but that quite a number whose group test IQs were average or slightly above would probably have been regarded as merely average by their teachers and educated accordingly. Eleven students had group test IQs of less than 110, and two had IQs of 100. Yet all had IQs of 130 or more on the Stanford-Binet.

Similar problems were noted by Walton, who found that approximately ten percent of her gifted kindergarten population had group IQs below 110 and that the group test misidentified a number of children. It should be added that group testing in the early grades is not done often; thus, the identification of young children is neglected at a time when a proper educational start should be made.

Group tests have been criticized because they stress verbal ability and thus penalize certain groups, although this problem may be greater at the elementary level that at the secondary. When scores on test batteries were compared for 18,000 junior-year male students from four ethnic groups, the same patterns of abilities were found across groups (16). It is important, however, to be aware of

TABLE 2
SCORES MADE BY 332 GIFTED PUPILS ON
A SELECTED GROUP TEST

IQ Score	Grades 4-5	Grade 7	Grades 10-11	Total	Nearest Percent
140+	13	11	11	35	10
138 - 139	3	6	6	15	4
136 - 137	5	5	9	19	6
134 - 135	8	9	10	27	8
132 - 133	9	12	15	36	11
130 - 131	9	12	8	29	9
128 - 129	8	10	12	30	9
126 - 127	5	14	22	41	12
125	1	10	7	18	5
124	4	7	6	17	5
122 - 123	5	8	8	21	6
120 - 121	1	6	6	13	4
118 - 119	1	1	3	5	2
116 - 117	2	3	3	8	2
114 - 115	1	2	4	7	2
112 - 113	-	1	3	4	1
110 - 111	-	-	2	2	1
108 - 109	-	-	2	2	1
106 - 107	1	-	-	1	-
104 - 105	-	1	-	1	-
102 - 103	-	-	-	-	-
100 - 101	-	1	-	1	-
Total	76	119	137	332	-
Total pupil loss (125+)	15	30	37	82	-
Percent of pupil loss	19.7	25.2	27.0	24.7	-

potential problems, not only with respect to language factors but also with respect to skill deficits and other limitations.

To summarize, group tests are useful and relatively inexpensive. Used in combination with other methods, they are effective screening devices. It should be kept in mind that they fail to identify some gifted students and that they sometimes identify erroneously. Different language backgrounds, reading deficiencies, group testing pressures, student motivation, and general learning deprivation should all be taken into account when the performance of individuals is evaluated.

A statement on the use of group tests of counselors, published by Psychological Corporation (57), presents a brief framework for selecting the gifted. Though oriented toward group tests at the secondary level, it contains useful suggestions.

A Counselor's Policy on Giftedness -- The Role of Tests in Selecting the Gifted

1

A gifted student program must start with goals -- goals which are understood and accepted by the whole staff. The goals will determine in part the procedures, including tests, which are appropriate for identifying the gifted.

2

A gifted student program must be expressed in terms of what a particular school can do now, or can arrange to do soon, for gifted students. Test scores on aptitude and achievement batteries become maximally useful only when the proposed differentiation of treatment of the gifted becomes reasonably clear.

3

No one group within the school should have exclusive control on defining brightness or identifying the pupils who will qualify. Superior abilities can be identified by teachers and principals, and by the students them-

selves, who often show considerable accuracy of self-appraisal. Nominations should come from all competent personnel. Final administrative determinations should not be in terms of some narrow concept but in terms of which pupils would likely be best served by each of the special educational efforts this school can provide.

4

For practical reasons, keep separate the search for the intellectually gifted -- the gifted in the cognitive areas -- and the search for the gifted in music, arts, physical skills, and social leadership. Aptitudes for these latter fields should also be evaluated in planning for those pupils who are mentally gifted. Similarly, mental abilities are relevant in assessing potential artists, dancers, and social leaders and planning their programs. When the purpose is to enhance and accelerate the education of the mentally gifted, the focus on assessing of cognitive abilities and achievements must be sharp.

5

Intellectual giftedness presents itself in many ways. Multi-aptitude test batteries are essential to the comprehensive assessment of each pupil's level and pattern of mental abilities. Beyond their use in selection, multi-aptitude batteries provide the basis for comprehensive counseling of the gifted and for determining what remedial or special work may be needed to avoid limitations on individual gifts arising out of deficiencies in basic, learnable skills.

Nomination by Others

Open opportunities to nominate a potentially gifted student should be given to all those who are in a position to know of his high capabilities: former teachers, principals, other school resource personnel, parents, peers, and community members, including the librarian. School personnel other than the current teacher often have had numerous contacts with a child and may have formed accurate opinions on the basis of out-of-class contacts. Former teachers, for example, may have discerned high abilities which are not apparent in the present environment. A librarian who encourages children to select materials

freely is in an excellent position to notice highly advanced general knowledge and unusual interests.

Nomination by Peers

Peer nomination is possible simply through awareness of comments pupils make about the knowledge of others. Pupils also may be asked to list children whom they would like to have help them with their various academic tasks, those who are good at art, music, who have original ideas, and so on. It should be remembered, however, that many children conceal their abilities very effectively as they conform to classroom expectations and that nominations from either peers or teachers are most accurate in a learning environment with open opportunities for the gifted to produce at their level of capability.

Parent Nomination

School personnel who listen to what parents say about their children often find cues to giftedness. A parent who tells of a child who taught himself to read through analysis of letter combinations on signs, box tops, and other materials, who spoke in sentences at age two, who asked what certain words were at age three, or who as a very young child is concerned about the effect of American bombing in other countries, is describing a very bright child. Similarly, a parent may bring in a song from a preschool composer or a highly detailed creative painting. Such cues should be used as a basis for referral and should not be dis-

counted. It is easy to dismiss products or information as parental pride, but parents have had much more contact with their child than the teacher has. It is just as likely that parents may underplay or fail to mention the accomplishments of children, especially if the parents and siblings also are very bright.

When teachers of young children have regular conferences or informal contacts with parents, they are likely to acquire information which will alert them to giftedness. And, as Jacobs (30) pointed out, parents are better at identifying giftedness than teachers.

Through the use of a simple form, parents can provide information on advanced abilities and knowledge which are not always apparent to the teacher. One-page forms sent to <u>all</u> parents in the early school years can be screened for indications of unusually high abilities. A short introduction may state simply that the teacher is interested in learning about the child and that she will use the information in planning appropriate experiences for him. Space then can be provided for the parents to fill in information on these items:

... Child's special hobbies or interests

... Recent books he has enjoyed or read

... Special interests other than reading

... Special problems and needs

... Any unusual accomplishments, present or past

... Special talents

... Any special opportunities he has had

... His relationships with others

... His preferred activities when alone.

Teachers are cautioned that parents may not be fully aware of a child's cognitive development. Parents who have limited verbal facility or who because of work, personal problems, or other factors communicate very little with their children are less likely to have formed judgments than those who are in constant communication with their child.

Pupil Products

When activities are encouraged at school, many indications of talent may be found in the products of pupils. Unusually advanced products, especially from young children, also may come from out-of-school activities. A very young child may take part in the required school activities and spend his time after school researching subjects of special interest. This research may culminate in an illustrated summary essay: One six-year-old, for example, wrote an essay on birds, describing traits common to all birds, giving some information on uncommon birds, and explaining principles of flight, migration patterns, and other data of special interest. Another, who had perfect pitch, refused to participate in kindergarten music activities because, as it turned out, the autoharp was out of tune and so were his peers. He did compose tunes at home which his mother wrote down. The following poems by a twelve-year-old boy (41) were produced in the social studies class of a teacher* who looked the other way as the student wrote:

These times have changed
And so have I.
I sit here alone
As the world goes by
And even now wish for a little of it back.

*Barbara Covey, Palos Verdes, California.

So what does the future hold for me?
A bright brilliant emergence
into a bright brilliant world
or a dull grey graduality of existence?
The answer is there
but yet to be discovered
yet to be blown past my foothold of soul.
In a world of tangibility
Somehow I cannot grasp
A song of beauty,
The blue sky,
A cool breeze.
Will they stop and wait for me
or must I chase
never reaching, never living?
Or may I wait
and let my fate blow by
just watching?
These times are changing
and so am I.

'Relativity in Society'

Quite alone, to the conversation I turn
my ear,
and I think all these people must
be queer,
for trash, on and on, is all
I hear;
but if these people are normal,
I fear
that I must be the one
that's queer!

The observations of teachers can be very useful in identifying special talents. This is especially true of the teacher who is in close communication with parents. Once the school is aware of the unique talents of a youthful painter, electronics expert, oboe player, or potter, it is often possible to find a community mentor for the child who can work with him in their field of mutual interest.

Student Expressions of Values and Ideals

Several studies have shown gifted persons to possess advanced concern for the problems of humanity, to be highly moral, to value truth, and to admire individuals who contribute to the betterment of mankind. Gifted students differ significantly from the general population in their choice of hero-ideals (39). The gifted, from the middle-elementary grades on, tend to choose those who have had a lasting impact through humanitarian, religious, scientific, political, or educational contributions, as opposed to peer, family, sports, or other figures from the immediate environment. Assigned essays to class groups on a hero---living or dead---with reasons for choice, may provide cues for further screening and nomination. Such essays are useful mainly with children who have had normal opportunities to develop verbal skills.

Autobiography

The autobiography is more useful with elementary school children than with secondary students, who often refuse such an assignment as an invasion of privacy. Very young children enjoy telling about themselves or talking into a tape recorder. Students in the middle grades may either use the tape recorder or write The Story of My Life. Cues indicating high abilities are often found in oral or written autobiographies. For example, a five- or six-year-old child who talks about a hobby which originated from his reading about it in a magazine, or who tells that his sister is now 3½ years old shows signs of ability far beyond the average and should be individually tested.

Multiple Screening Measures, Abbreviated Tests*

For better accuracy in final identification, many school districts use several screening measures and short, standardized tests or sections of tests. These preliminary means also serve to reduce the cost of identification. Abbreviated tests can often be administered by untrained examiners and take little time. In combination with nomination by teachers and other means of identification, they are of value.

Some school districts have used brief tests as an intermediate step to individual testing. In Escondido, California, it was found that 50 percent of students referred by teachers achieved 115 IQ or higher on a brief vocabulary test,* that approximately 60 percent of those with reading scores 1.7 grades or more above grade level achieved 115 IQ or higher on the test, and that 60 percent of students receiving 115 or more on this test had IQs of 132 or more on the Stanford-Binet. Walton (87) used subtests from several tests as well as abbreviated tests to measure specific abilities in kindergarten children and found all of them of significant value in predicting giftedness on the Stanford-Binet. Los Angeles City counselors noted that brief tests lacked cultural bias, indicated specific strengths, and were enjoyed by pupils.

Despite their advantages, abbreviated tests do have limitations. It is not recommended that they displace individual

*The listing or evaluation of specific tests is not done here, because such evaluation should be preceded by a survey to determine tests commonly used for gifted children. Time does not permit such a survey for the present document; therefore, singling out specific instruments for comment would be unfair.

tests. IN ALL INSTANCES, CAREFUL STUDY OF EVALUATIONS SUCH AS THOSE IN BUROS MENTAL MEASUREMENTS YEARBOOK (11) SHOULD PRECEDE USE.

To reinforce the importance of such study, here are some comments (from Buros) by experts on brief tests for testing the gifted:

> ... The uncritical use of the _____as a substitute for the Binet or Wechsler instruments is ill advised.
>
> ... Test validity is dubious...for those whose environments do not include middle class language patterns.
>
> ... As in the case with all short tests, the amount of information derived from the test is limited....
>
> ... In summary, the _____ is a highly usable test, of moderate reliability, and largely unestablished validity.
>
> ... None of the correlations based on disadvantaged or minority groups appears to be significantly greater than zero, although here again the persistent failure of the manual to provide information on statistical significance requires the consumer to be his own statistician.
>
> ... The tests are not adequate for cross-cultural research of comparisons. For that we must wait for a much more definitive test development and normative effort.
>
> ... However, a healthy skepticism is justified if not demanded in the use of this test which was hastily marketed with inadequate norms and meager reliability and validity data.
>
> ... This test...is less culture free than the Binet tests. It is of little or no value because of inadequate sampling of abilities.

In many instances, the search for valid and reliable measures has occurred at the early school levels. Problems have been found in attempts to predict consistently from early-childhood tests to later heavily verbal tests and to identify giftedness effectively by the use of non-verbal rather than verbal tests (12, 92).

Problems have arisen from the use of short forms of individual tests (62) for minority children, from combinations of tests, and in the varying results obtained among different sex groups, ethnic groups, and socioeconomic groups (47).

Tests used in combination have been found effective in predicting skills found in other tests, but this approach is time consuming. And if the base of a test is non-verbal, it is of doubtful value in predicting success on a verbal test or the verbal skills necessary for success in school.

Two more comments are in order: Many of the instruments advocated for screening the gifted have been validated with average or handicapped children. It is therefore important to examine closely their potential usefulness for the gifted on such elements as content and upper range. Evidence also should be sought regarding their usefulness with the economically disadvantaged or with groups of differing cultural backgrounds since some short tests are totally verbal and actually would be less useful than individual instruments of greater scope.

Creativity Tests

The interest in measures of creativity has been due largely to a growing desire for measures of added human abilities and talents. The early discovery and nurture of those who promise to make outstanding creative contributions has been of continuing concern to anyone interested in giftedness. Attempts to develop creativity tests, mainly based on the work of Guilford, proceeded at a growing rate during

the 1960s and still are in process at many centers. The development of tests which can be used with assurance in the identification of creativity or potential creativity in the school population has been a complex problem.

Early reports of creativity studies, based on adaptations of the Guilford tests, were highly enthusiastic about the possibilities for identification of abilities untapped by existing intelligence tests. These studies have been thoroughly examined by a number of experts and their reviews, in turn, have been useful to those practitioners who make judgments about both the value and the limitations of tests (11, 13, 79, 83, 84).

Some of the researchers in creativity, notably Barron (3) and other measurement experts, have provided extensive comments on testing problems and evaluations of current tests (11). Many have pointed out difficulties inherent in the testing situation: Group administration, classroom testing, and demand for production are contradictory to the creative process. Attempts to eliminate these problems have introduced additional complications (77).

Recent evaluations of published creativity tests by five experts stress especially the need for validity studies in order to determine whether high scores truly identify original persons. Their various comments suggest that the tests may be interpreted most accurately as attempts to measure particular elements of creativity rather than as measures of creative thinking. The general consensus is that the predictive and unique value of these tests should be verified as soon as possible (11, 12). The experts agree that this is a difficult task which will require careful studies of the relation-

ship between high test performance and production of extraordinary value.

While the question of validity is still largely unresolved, creativity tests have helped revive an interest in improved conditions for learning. Hundreds of studies during the 1960s attest to this fact. One recent summary cites 142 studies which used various creativity measures in evaluating different attempts to improve learning (77).

Methods to improve learning ranged from toys, to typing, Junior Great Books, individualized reading, rewards, encouragement, companionship, art and music experiences, dramatics, programmed exercises, and special programs to produce productive thinking.

Although one may question the originality of some of the approaches, the availability of the tests has encouraged experimentation, and the studies undoubtedly have had some influence on school practices. Writings on classroom conditions and teacher behavior conducive to creativity have been useful in the promotion of classroom mental health, and while efforts go on to resolve some persistent questions regarding the creativity tests themselves, the interest in creativity is a beneficial influence on school practices. And, the recent publication of creativity tests for elementary children by Guilford will undoubtedly produce added studies and information (25a).

Judgments of Creativity by Experts

Because of the specific nature of many creative talents, some schools have relied on experts in various fields to judge creative products. The selection of outstanding products is an excellent way to identify talent which should receive special

attention. As Barron (3) has pointed out, evaluation of creativity should be made by people who can distinguish eccentricity from originality and who understand the qualities of complexity and originality inherent in the creative act. Among school children, these qualities must be discerned at various age levels; therefore, an understanding of child development, as well, is important.

Usually, schools have used experts to select products of high quality to be included in yearly poetry publications, art exhibits, or other events. Community experts also have judged essays, short stories or other creative writing, inventions, and other products. The use of experts has several advantages, among them the use of educated judgment, saving of time for school personnel, and involving of laymen in school affairs. The experts also get further involved with gifted young people. And the very fact of recognition for outstanding creative work has a strong motivational impact on the youthful creator.

Individual Tests of Intelligence

Individual intelligence tests have a number of advantages over group tests. A broader sampling of abilities is possible, better testing conditions can be arranged than in group testing, a greater range of abilities can be tested, and interpretation of the quality of performance is possible. The kinds of items in an individual intelligence test are fairly typical of children's thinking, especially in the school setting.

Obvious problems include the cost, the lack of trained personnel in many geographic areas, unwillingness to assign psychologists

to test the gifted, and some content which penalizes children with language or environmental handicaps. Individual intelligence tests have been criticized for their inadequacy in identifying creative potential and a number of traits important to success, such as values, habits, and perseverance. Intelligence has proved, however, to be a significant factor in a number of more specialized abilities which are often difficult to measure. For example, Butcher cites studies conducted during the 1960s which show intelligence to be a common variable in athletics, science, leadership, communication of emotional meaning, coping, persuasiveness, word-associations, and even in the fundamental processes of visual perception. It is an even more crucial variable in problem-solving, learning, creativity, scholastic attainment, and vocational success (12). The talents and creative production exhibited by the Terman subjects (75) attest to how well achievement can be predicted through the individual intelligence test.

Individual intelligence tests also have been criticized because they measure verbal factors. Vernon points out that it is particularly inappropriate to use non-verbal tests to measure educational potential since scholastic achievement can be better predicted from various verbal measures (80).

Actually, many abilities are tapped by the full-length individual test. Guilford (25) commented that the Stanford-Binet probably encompasses 28 of the factors in his Structure of Intellect. Meeker has found, according to Gowan and Bruch (23), that the Stanford-Binet contains 54 of the 120 abilities hypothesized in the Guilford Structure and that the Wechsler test measures fewer separate abilities than the Binet.

While the tests do not measure all human abilities, they do identify gifted children much more effectively than group measures (50, 87). Sheldon and Manolakes pointed out that group test ratings tend to be higher for below-average students while children who are above average do less well on group tests than on the Stanford-Binet (71).

It is important to use an individual test which provides an adequate ceiling and measurement of a number of abilities. The Stanford-Binet and the Wechsler Intelligence Scale for Children are the two full-length individual tests in widespread use for testing the gifted; they have been compared by a number of authorities who have pointed out that the Binet has a higher IQ range than the Wechsler (19). The Wechsler scale does not encompass either extremely high or extremely low IQs, and thus is limited for the gifted. Other comparative studies show that IQs of gifted children average about ten points lower on the full-scale Wechsler than they do on the Binet (4).

Goslin (22) commented that individual tests such as the Stanford-Binet have been used with relatively few children and that criticism of tests has been directed largely at group tests.

It is important to use proper individual tests with the gifted whenever possible. Individual tests provide a much more accurate ceiling than group tests and thus give a better estimate of ability. The skilled examiner is able to assess not only correctness of response but also quality and style of response. Because the interview situation is automatically there, the skilled examiner may learn much of value about a child's attitudes, interests, and background.

An example comes from the recent experiences of one school psychologist who worked with a seven-year-old boy referred for a "severe learning disability." The psychologist was told by the teacher that he was "dumb" although he proved to have a Binet IQ of 134. Before the test the boy said, "I guess you are the one who is going to find out why I like to daydream." On the vocabulary test his definition of a diamond was, "A diamond is in the same category as a ruby, but it's not red and it's not exactly white; but it sparkles, but not the kind of sparks that are made by a welding torch. Do you understand what I mean?" To the question, "What is fur?" he said, "It is hair. On people fur is called hair, but hair on an animal is called fur."

The example provided in this instance could be multiplied by the thousands, with variations. The group test would not evoke such responses, which are obvious cues to high ability.

The Use and Relative Value of Various Identification Methods

One of the most thorough assessments of various approaches to identification was done by Pegnato and Birch (51). As Table 3 indicates, all measures left much to be desired. Group achievement and intelligence tests were useful in identification, but appreciable numbers of gifted children were misidentified or overlooked. Group tests in combination increased the effectiveness to 97 percent and probably are the most useful method, short of individual tests. The inability of teachers to recognize creativity in art is obvious; only a few children were correctly identified.

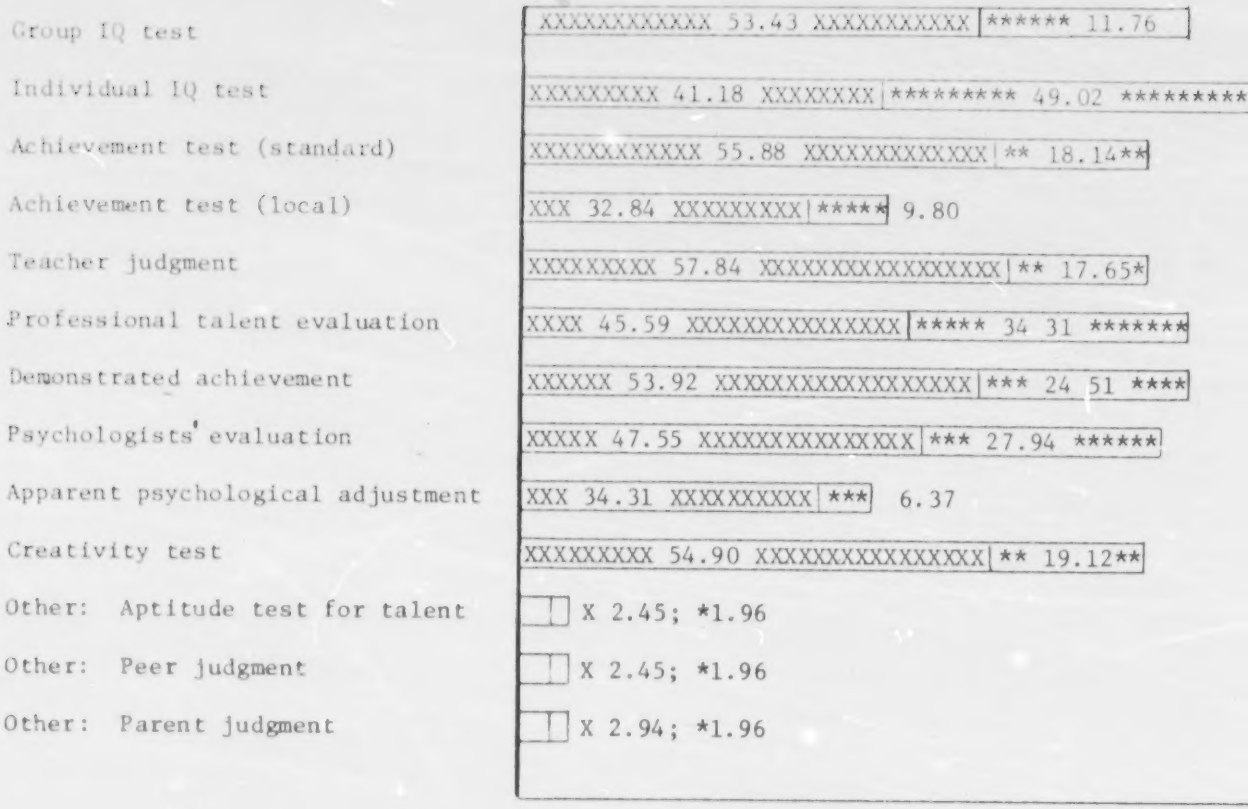
Table 3. Identification of Gifted Children in Junior High School
(after Pegnato and Birch, 1959)

Method	Criterion	Number Identified	Correctly Identified	Mis-identified	Over-looked	Effective-ness	Effi-ciency**
Teacher Judgment	"Mentally Gifted"	154	41	113	50	45%	27%
Group Achievement Tests	3 grades over grade placement	335	72	268	19	79%	21%
Honor Roll	B average or better	371	67	304	24	74%	18%
Creativity in Art	Teacher judgment on creative ability	66	6	60	85	7%	9%
Group Intelligence	Otis B-IQ 115	450	84	366	7	92%	19%
	120	240	65	175	26	71%	27%
	130	36	20	16	71	22%	56%

* Effectiveness = $\frac{\text{Gifted found by screening}}{\text{True number of gifted}}$ ** Efficiency = $\frac{\text{Number of gifted found}}{\text{Total screened as gifted}}$

Ninety percent of 204 experts on the gifted saw the individual intelligence test as important or essential. The following survey was part of the 1972 Commissioner of Education's report (38).

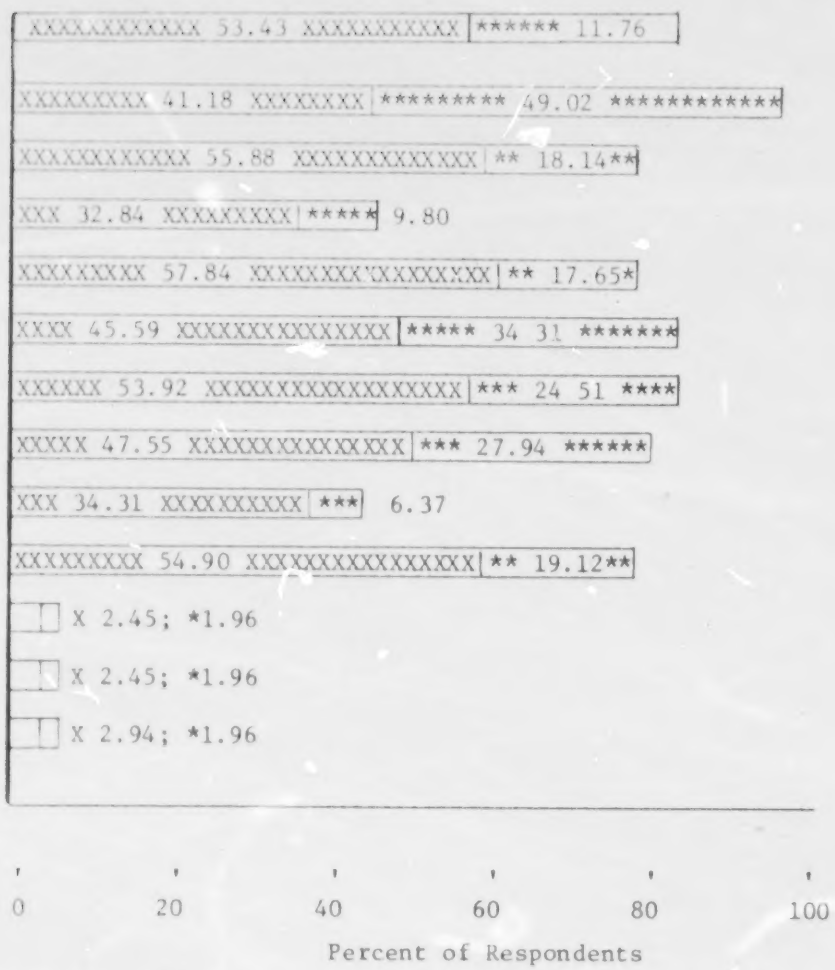
Figure 1. Minimum Criteria Judged Important or Essential for Identifying Gifted an



Source: A Survey of Leadership in Education of Gifted and Talented Children and Youth, 1971

Legend: XX = Important, ** = Essential

Criteria Judged Important or Essential for Identifying Gifted and Talented Children



Legend: XX = Important, ** = Essential

The discrepancy between the actual use of various measures and those recommended is seen in Table 4 (40). While teacher observation and nomination are foremost in use, individual intelligence tests and previously demonstrated accomplishment are rated first and second as preferred methods of identification. Creativity tests, while least used, are recommended as often as group achievement tests.

Table 4. Major Procedures Used and Recommended in the Identification of Gifted Students

Major Identification Procedures	Percent Using (and Rank Order) (1)	Percent Recommending (and Rank Order) (2)	Rank Order Difference (3)
Teacher observation and nomination	93 (1)	75 (3)	-2
Group school achievement test scores	87 (2.5)	74 (4.5)	-2
Group intelligence test scores	87 (2.5)	65 (6)	-3.5
Previously demonstrated accomplishments (including school grades)	56 (4)	78 (2)	+2
Individual intelligence test scores	23 (5)	90 (1)	+4
Scores on tests of creativity	14 (6)	74 (4.5)	+.15

Source: S.P. Marland, Education of the Gifted and Talented, Washington D.C.: U.S. Office of Education, 1972. Column 1 data are drawn from page 261 of this report on identification practices in the local school systems of Illinois and are reported as averages of elementary and secondary school practices; Column 2 data are from page 122 of the report and are based on what was considered important by 204 experts in the education of the gifted.

The state of Ohio uses multiple methods to identify the gifted (21). As reported by Gloss in Table 5, the use of several criteria is desirable

since the use of only the opinion of teachers or only school marks could limit special opportunities to those students who were high achievers and thus eliminate those who need special programs the most.

Table 5. Ohio's Criteria Used for Identifying Gifted Students

	Number of Districts	Percent
IQ	150	94
Individual IQ	98	
Group IQ	126	
Both Individual and Group IQ	71	
Teacher Opinion	149	94
School Marks	144	91
Achievement Tests	123	77
Aptitude Tests	54	34
Pupil Opinion	12	8

The Case Study

The end product of the identification process is a case study where all information concerning a student and his unique abilities, talents, interests, psychological traits, and special educational accomplishments and needs are made apparent to educators. The more complete the information, the greater the base for understanding and effective planning. A case study of the gifted can be relatively inexpensive. In the study, consideration should be given to the child's health, language status, intellectual stimulation at home, interest of

home in achievement, possibility for study at home, nutrition, attitudes of parents, peers, and teachers toward learning and achievement, attitudes of teachers toward the child and his potential for learning, and his opportunities for success.

The case study should be as complete as possible and it should be cumulative. A case study is far easier to do on a gifted child than on a handicapped one. Often the child himself can contribute an autobiography, or a list of interests or products. The wealth of information available from a parent is evident on pages 78 to 81. With information furnished by several people, the psychologist can do a better, more efficient job.

A good form for a case study was developed by Robeck and her colleagues (65). It takes relatively little time to do and can be used together with other information.

Case Study Format

Screening and Nomination Form

Pupil's Name_____ Teacher_____

Birthdate_____ School_____

Grade_____ Date_____

Test Data

1. Academic Achievement Tests

Name	Results	Grade	Date

2. Group Ability Tests

Name	Results	Grade	Date

3. Individual Intelligence Tests

Name	Results	Grade	Date

4. Other Tests or Examinations

Name	Results	Grade	Date

Intellectual Functioning

Disregarding test results, would you rank this pupil in the upper 5 percent of his class in academic performance? In your opinion, is this child "mentally gifted"? Is classroom performance consistent with results of standardized tests?

Upper 5 percent?		"Mentally Gifted" (by state criteria)?		Performance consistent with tests?	
Yes	No	Yes	No	Yes	No

Check the column which best describes the child's intellectual functioning. These items include a range of possible characteristics or objectives. A child is not expected to be high on all of them.

Item to be evaluated	Little 1	2	Moderate 3	4	Much 5
1. Knowledge and skills (Possesses a comfortable knowledge of basic skills and factual information)					
2. Concentration (Has ability to concentrate; is not easily distracted)					
3. Enjoyment of school (Enjoys academic pursuits and assignments; likes school)					
4. Persistence (Has the ability and desire to follow through on work; concerned with competition; able to see a problem through)					
In own interests.....					
In assigned tasks.....					
5. Responsive (Is easily motivated; responsive to adult suggestions and questions)					

Item to be evaluated	Little 1	2	Moderate 3	4	Much 5
6. Intellectual curiosity (Pursues interests primarily to understand or satisfy curiosity; questions the common, ordinary, or the unusual; wants to know how and why; generates questions of his own, in connection with personal interests or group concerns)					
7. Challenge (Enjoys the challenge of difficult problems, assignments, issues, and materials)					
8. Perceptiveness (Is alert, perceptive, and observant beyond his years; aware of many stimuli)					
9. Verbal facility (Shows marked facility with language; uses many words easily and accurately)					
10. Fluency of ideas (Produces a large number of ideas or products, often very quickly)					
11. Flexibility (Is able to approach ideas and problems from a number of perspectives; adaptable; able to find alternative ways of solving problems)					
12. Sensitivity to problems (Perceives and is aware of problems that others may not see; is ready to question or change existing situations and suggest improvements)					

Item to be evaluated	Little 1	2	Moderate 3	4	Much 5
13. Originality (Often uses original methods of solving problems, is able to combine ideas and materials in a number of ways, or creates products of unusual character or quality)					
14. Imagination (Can freely respond to stimuli with the production of mental images; may "play" with ideas or produce remote, fanciful associations or insights)					
15. Reasoning (Is logical, often generalizes or applies understanding in new situations, expands concepts into broader relationships, or sees parts in relation to the whole)					
16. Scientific method (Can define problems, formulate hypotheses, test ideas, and arrive at valid conclusions)					
17. Independence in thought (Inclined to follow his organization and ideas rather than the structuring of others)					
18. Independence in action (Able to plan and organize activities, direct action, and evaluate results)					
19. Independence in work habits (Requires a minimum of adult direction and attention; possesses research skills to facilitate independent work)					

Item to be evaluated	Little 1	2	Moderate 3	4	Much 5
20. Elaboration (Concerned with detail and complexity; often involved with a variety of implications and consequences)					
21. Aesthetic appreciation (Enjoys and is responsive to beauty in the arts or nature)					

22. Describe any unpredictable behavior which interferes with study; e.g., wandering away from seat without apparent purpose:

23. Describe any unusual preoccupations such as "daydreaming" or "flights into fantasy" which lessen the pupil's learning efficiency:

24. Describe any learning characteristics which seem outstanding or would especially facilitate this child's progress in a challenging educational program:

25. Describe any learning difficulties the child might have in particular areas -- difficulties which could hinder progress in such a program:

26. Describe any examples of the child's creative productivity:

Another form, easy to use, can provide an assessment of psychological benefits from a program during the course of the year (1). While designed for evaluative purposes, such a form could also be adapted, through a slight change in directions, to provide an initial assessment of psychological well-being as well.

Evaluation by Teacher

Pupil_____ Date_____

School_____ Teacher_____

Grade_____

Check according to your rating of growth during the school year. 1 = Not at all; 2 = Somewhat; 3 = Average; 4 = More than average; 5 = Exceptional

	1	2	3	4	5
Understanding of self					
a. This student is able to estimate his own strengths and weaknesses realistically.					
b. He feels a sense of personal worth.					
c. To what extent would you describe him as "self-accepting"?					
Love of learning					
d. Does he place too great a value on obtaining high grades?					
e. He seems to have a "need to know."					
f. Does he seem to value learning for its own sake?					
Social conscience					
g. He shows regard for less bright, younger, or otherwise "different" children.					
h. He treats others with respect regardless of their status, color, or creed.					
i. Is he sensitive to the feelings and needs of others?					

	1	2	3	4	5
Tolerance for ambiguity					
j. Does he seem to feel comfortable with situations which may not have "right" or "wrong" answers?					
k. He is willing to make up his own mind.					
l. He is willing to consider more than one solution to a problem.					
Creative thinking					
m. Originality is frequently characteristic of his ideas.					
n. There is an imaginative quality to his work.					
Quantity and quality of production					
o. Do you consider his intellectual productivity adequate in quantity?					
p. Disregarding the amount of work produced, do you consider it adequate in quality?					
Response to challenge					
q. He seems eager to perform difficult tasks.					
r. He is willing to persevere in a problem situation.					
Use of teacher					
s. He seems to gear his responses to what he thinks is expected.					
t. He seems to feel free to express his own opinions in the teacher-pupil relationship.					
u. Does he use you as a "sounding board" for his own theories?					
v. Does he seek you out for individual inquiry or discussion?					

The following form can be filled out by pupils as soon as they are able to read and write or by teachers or aides for young children in an interview situation. It gives information on interests, academic achievement, and a number of other factors (39).

Pupil Interest Survey

Date_____

1. School_____ 2. Pupil_____

3. Sex (circle) B G 4. Grade_____

5. What are your favorite TV programs?_____

_____

6. What are your favorite magazines?_____

_____

7. What parts of the newspaper to you like to read best?_____

_____

8. What are the best books you have read this year?_____

_____

_____

9. Of what clubs or organizations are you a member?_____

_____

Offices held:_____

Honor or recognition received:_____

10. Special activities you take part in at school:_____

_____

11. In which sports are you interested?_____

_____

Do you play?_____

12. Your favorite recreation:_____

13. List your hobbies:_____

_____

_____

14. Do you have other interests? Please list._____

_____

_____

15. List any collections you have made and your age when you made them.

_____

_____

16. What is your favorite family recreation?_____

_____

17. Have you taken any trips outside of the State?_____

Where?_____

18. What kind of trips would you like to take if you could?_____

_____

_____

19. Do you have a job?_____ What?_____

_____

20. Vocational choice:_____

21. Parent's vocational choice for you:_____

22. What are your educational ambitions?_____

_____

23. How do you plan to finance your education?_____

_____

24. What are your favorite school subjects?_____

_____

25. What subjects do you dislike?_____

_____

26. What do you like best about school?_____

_____

What do you like least?_____

_____

An inventory for use with junior and senior high school students will be helpful in identifying specialized interests. This type of form has been used to plan special, small groups under community sponsors.

So that we may look at ways to provide for as many special interest areas as possible, will you please take a few minutes to fill out the following items. Think beyond special programs now offered, such as orchestra, athletics, and others. Make your response as clear and complete as possible. Your help will assist us in planning added offerings, and your response will be kept confidential. Thank you.

1. Describe your hobbies and special interests. Omit the purely social, please.

2. Describe any special experiences you have had because of your interests. Include elementary school.

3. Describe any special training you have had in your interest area.

4. What are your favorite subjects?

5. If you had a half day of free time during the week, how would you like to use it? Be specific.

6. If money were no problem, what career would you choose? Why?

Health reports by teachers and school physicians can require minimum time. The following forms request checks only in problem areas. The teacher form includes some items of a psychological nature as well. The forms were developed with the advice of health education experts and physicians (39).

Health Report -- Teacher Observations

1. County _____ 2. District _____

3. School _____ 4. Pupil _____

5. Sex (circle) B G 6. Grade _____

Use check only to indicate areas needing attention. Absence of checks will indicate that no problems exist.

Comments on areas needing attention

Has frequent absences due to illness _____
Appears excessively thin _____
Appears excessively fat _____
Tires easily _____
Has poor coordination _____
Has poor posture _____
Complains frequently of headaches _____
Has frequent colds _____
Has skin eruptions _____
Has speech defect _____
Complains frequently of upset stomach _____
Has frequent styes _____
Has crossed eyes _____
Appears to have vision difficulty _____
Has discharge from ears or cotton in ears _____
Complains of earaches _____
Appears to have hearing difficulty _____
Is a persistent mouth breather _____
Complains frequently of sore throat _____
Complains of toothache _____
Has unclean or decayed teeth _____
Seems overly aggressive _____
Frequently loses temper _____
Appears nervous _____
Appears shy or withdrawn _____

Is inattentive _____

Other _____

Signature of teacher _____ Date _____

Health Report -- Medical Observations

1. County _____ 2. District _____

3. School _____ 4. Pupil _____

5. Sex (circle) B G 6. Grade _____

Vision: R _____ L _____ Corrected: R _____ L _____

Hearing: R _____ L _____ Hearing defect: _____

Use check only to indicate areas needing attention. Absence of checks will indicate that no problems exist.

Comments on areas needing attention

Nutrition _____

Skin _____

Eyes _____

Ears _____

Nose _____

Teeth _____

Throat _____

Heart _____

Lungs _____

Abdomen _____

Genitalia _____

Orthopedic status _____

Posture _____

Neurological status _____

General physical status _____

General emotional status _____

Other _____

Signature of physician _____ Date _____

Information from parents can be obtained either from a questionnaire or from a less structured biography. Both formats are valuable; the questionnaire guides the parent to items of value; the biography elicits descriptions of a child's outstanding abilities which would probably never appear on a more formal questionnaire. While the biography quoted below is particularly long, it is nevertheless true that parents of the gifted often write voluminous reports willingly. The writer has yet to find parents who do not furnish information on their gifted children freely and gladly. Where parents would have difficulty in writing summaries because of language or other problems, interviews can be taped and summarized.

Parent Questionnaire*

Date: _____

All information on this form will be strictly confidential and will be used only for study purposes. Your responses will be used only in a group context and you will not be identified personally in any way. If you have a baby book for this child, will you please refer to it.

1. School _____ 2. Student _____

3. Sex (circle) B G 4. Grade _____

5. Birthday _____ 6. Age _____

7. City of birth _____ 8. Mother's age at birth of child _____

9. List ages for the following (in months or years and months):

Start of talking	_____	Bladder control fully established	_____
Use of sentences	_____	Bowel control fully established	_____
First step unassisted	_____	Tied shoes unassisted	_____
First walked easily	_____	Rode tricycle	_____
Sat without support	_____	Rode bicycle	_____
First tooth	_____	First learned to read	_____

10. Schools attended City and State Date (from ____ to ____)

_____

_____

_____

11. Describe early indication of superior ability: _____

_____

12. Did the mother have health problems during pregnancy? Yes ____ No ____

13. Was the birth difficult? Yes ____ No ____

14. Has the child had any dietary problems? Yes ____ No ____

15. Does the child have any speech problems? Yes ____ No ____

16. Does the child complain about his health? Yes ____ No ____

* Abbreviated from a form used in Educational Programs for Gifted Pupils.

17. Is the child poorly coordinated? Yes___ No___

18. Has the child had special problems with sleeping or rest? Yes___ No___

19. Does the child have any serious health problems at present? Yes___ No___

20. Has the child had any of the following? (Check)

	Yes	No		Yes	No
Allergy			Rheumatic fever		
Diabetes			Tuberculosis contact		
Epilepsy			Other serious illness		
Heart disease			Major operations or injuries		

21. Comments regarding any area marked Yes: _____

_____

_____

22. Child resides with: (Check)

Father ( ) Mother ( ) Other ( ) If other, please specify.

Occupation of:

Father _____

Mother _____

Other adults in the home _____

23. Brothers and sisters:

Names	Ages

24. Hobbies of:

Father	Mother

25. Father's vocational goal for child (be specific) _____

26. Child has own room ( ); shares with others _____ (number).

27. Private lessons taken by child:

Kind	How long taken	Frequency

28. Trips child has taken:

Place	Age

29. Things the family does together _____

30. Child's recreational choices _____

31. Choice of playmates (ages, sex, numbers, etc.)_____

32. How does he get along with his playmates?_____

33. Preferences when he is alone_____

34. Child's membership in out-of-school clubs or groups_____

35. Child's reading interests (favorite books -- types, titles)_____

36. Amount of child's reading per week (estimate)_____

37. Child's hobbies and collections _____

_____

38. Child's special talents or skills _____

_____

39. Child's special problems or needs at home _____

_____

40. How does the child get along with others in the home? _____

_____

41. Child's home responsibilities _____

_____

42. Does he have an allowance? Yes____ No____ Amount per week_____

43. Discuss the attitude of the child toward school _____

_____

_____

Does your attitude differ?_____ If so, in what way?_____

_____

_____

44. Child's school needs as you see them _____

_____

45. Describe the child as you see him (personality, attitudes toward home, work, friends) _____

_____

_____

Date _____ _____
Name of informant

_____
Relationship to child

A Biography*

When he was two, J. would sit with my dad by the hour and name objects in picture magazines. I entered him in nursery school when he was only two because although he was the youngest, he was toilet trained and big for his age. He was the youngest in the school but went into the older group because of his size. He hadn't been around children before and would knock some of them down trying to love them.

He didn't talk much and wouldn't sleep during nap time. He enjoyed the story time best and laughed a great deal at the stories. At 2½ he started doing jigsaw puzzles. By the time he was three, he could do complicated ones, and now, as a 6-year-old, he works on 1,000-piece puzzles successfully.

When I was pregnant with our newest, J. was very curious about the baby. He wanted to know how I was going to dump it out, how it ate, if it could see, how it moved, and what size it was at all stages. We got a book from the library so that he could study the embryo and fetus....

By the time he was 3½ he had learned his numbers and alphabet. He taught himself the numbers from a deck of cards and the dice in his games. He picked up the alphabet from the backs of a set of encyclopedias. When he was 4, he got an alphabet board with which he learned the letters better and started spelling words. From

*Biography courtesy of Jeanne Delp, Garden Grove School District, California.

morning to night he asked how everything in the house was spelled.... At 4½ he was trying to teach himself to read. We called the principal of the nearby school to see if he was against a child's learning to read before he started school. He said he didn't think it would hurt him.... He never played with the toys that the other kids did. Guns, cars, trucks, etc., never interested him. He preferred his alphabet boards, puzzles, and games. He would get very upset with neighbor children because they wouldn't or couldn't play his games with him. He usually played with girls older than he but had no really close friends.

My husband, mother, J., and I often played cards. He picked up the fundamentals quickly and competed on an adult level successfully. His present closest friend is an equally bright little neighbor boy. They play very imaginatively but have two presidents in their games because neither of them will be vice-president. We took him to the library once a week, and by the time he started kindergarten he was reading books from the second-grade shelf. He didn't know all of the words, but he would sound them out fairly well and ask what they meant. He would read anything that had words on it -- signs, billboards, labels, etc.

At that age he also became interested in arithmetic, writing down his own problems, solving them, and checking with us to see if he was right. In kindergarten he was very happy and enjoyed school. He had an excellent teacher who brought in extra materials for several of the children and gave them extra responsibilities. She would let J.

read stories to the rest of the children during the rest period, an assignment which he loved, as he is very forward and enjoys people.... He had some problems in kindergarten because he talked all the time and was very aggressive. He also fought a lot with the neighbor children at this time....

He started off on the wrong foot in first grade. He told the teacher he didn't like the pre-primer. He constantly disrupted the class. His behavior was not better on the playground or in the cafeteria. His teacher would call us quite often to complain about what he was doing. He picked up all the dirty words, and we had a terrible time breaking him of using them although he never used them before adults. We had many conferences with his teacher and principal but got nowhere. He got to the point where he didn't want to go to school. He would get up in the morning complaining that he didn't feel well -- his head ached, his stomach hurt, or his foot, or anything he could think of. He came home from school crying often....At about this time he was placed in a special group for bright children....While we were having all this trouble, we were amazed at his thinking. When reading about the Civil War and slavery, he wanted to know if Vietnam was a civil war and, if it was, what we were doing over there. If we bombed their homes and children, why didn't they come over here and bomb ours?

When the female puppy we got J. went into her first season, he had to know all about this part of reproduction. He has acquired a pretty complete sex education. He got several books from the library showing the human body and the process of birth. He is still interested

in the complete human body, how cells form muscles, etc. The interest in science is widespread. He has learned on his own how various circuits and resistors work, has grown crystals in the hot water heater closet, and won a first prize ribbon at the science fair th[illegible]ear. He has made dye tests for food substances, frozen bugs, etc. Each summer he grows a garden.

He is interested in government and laws and how they work. He is very conscious about living within our laws and watches my driving. He is very sympathetic to poor people or those who are handicapped or hurt. He wears people out with his curiosity but is enjoyable to have around. He is active, gets into trouble, displays his love for others without embarrassment, plays ball, fishes, adores his dog, and wants others to like him very much.

With the opportunity to learn that he now has, he is getting along very well and is happy in school.

Mini Case Study*

Javier is an attractive sixth-grade Chicano boy of average size and boundless energy. He is the third of five children, who are all bright. His IQ of 146 is evident in his activities within and without the classroom. He loves to read and is talented in creative writing. He reads voluminously of writings such as Poe and Shakespeare. He is also interested in art, math, and science. He is a strong leader

*Courtesy of Eileen Lilly, Coordinator of Gifted Programs, Hacienda-La Puente Unified School District, California.

and reported by teachers to be a real "con artist."

The family comes from the East Los Angeles barrios. The father, a powerful man, does not support the family and is absent from the home most of the time. The mother works irregular hours as a beauty operator and has a great concern for the children. There is strong family pride, each child caring for the next younger. Javier is reported by his school staff as alternately polite and obnoxious, needing an active, demanding school program and a strong hand.

He is patient and compassionate and works as a tutor to kindergarten youngsters. Outside school he participates in the sports program and is the key figure in neighborhood gangs.

The school he attends is in a low socioeconomic area with few other gifted children. The staff is excellent and has taken a substantial interest in Javier since he came to them three years ago after being dismissed from his previous school for misconduct. They feel they are winning the battle by providing a rich individualized program at the school. School seems to be the most stable factor in the environment. Javier plans to attend college at this point. The staff sees the possibility of great success or serious problems depending on his experiences in the junior high years. This is a case of expert programming rescuing a potential dropout or, as one teacher put it, "a future gang leader."

Criteria for Selection of Various Identification Measures

... In the case of tests: Have they been adequately standardized?
Are they appropriate for this population?

Are the reviews favorable? (Buros)
Is the test ceiling adequate?
Is the content sufficiently broad in scope?
Is the information derived for value?

... And various forms: Do they solicit information of value?
Do they provide for ease of response?
Do they consume a minimum of time?
Do they avoid duplication?

The insights afforded by descriptions in case studies are apparent in the following accounts of a six-year-old. Data supplied by the teacher, by the pupil in an interview, by the parents, and by the psychometrist show clearly that traditional curriculum offerings will not suffice for this child.

Teacher Evaluation of Pupil*

Name: Lee Date:

1. His ability to solve problems?

   Highly developed ability to solve problems. He takes pleasure in talking over the problem, verbalizing possible solutions, and then choosing the most logical answer.

2. His knowledge in subject matter areas?

   Superior knowledge and information in subject matter areas.

3. His knowledge and use of research skills?

   He knows how to use encyclopedias to look up information. Is able to use and read the Junior Britannica independently.

4. His status with his peer group?

   Well liked and accepted by peer groups.

---

*Elizabeth Scott, Palos Verde Unified School District, California. Forms are from the district.

5. His ability to accept responsibility and to work independently?

Although at first Lee was somewhat hesitant to try something new or to take responsibility in group projects, he is now most willing and is capable of working independently.

6. His critical thinking ability?

He is developing in critical thinking ability.

Problem areas: None

General remarks: Lee is enthusiastic and cooperative. He contributes good ideas and information to the group.

Special studies:

1. Independent home project of incubating, hatching, and raising of bobwhite quails.
2. Independent reading at home and at school on subjects related to our unit on birds followed by written reports and oral sharing with groups.

Guidance Department -- Teacher Referral Form

Name Lee School Teacher

Address Phone Grade

Birthdate 2-20 Age in: Years 7 Months 2 Date of referral 4-1

Reason for Referral: To determine giftedness

Specific behavior leading to the referral: (Attach additional sheets, anecdotal records, if needed):

Superior ability in reading, mathematics, and science

Superior speech and language development

Superior ability to organize thoughts and make logical deductions

High interest and curiosity

Specific Questions That Testing May Answer:

The IQ score

Specific strengths and weaknesses

	Superior	Above Average	Average	Below Average	Poor
Physical Maturity.....					
Social Studies.....					
Group Participation.....					
Academic Achievement.....					
Work Habits.....					
Ability To Use Research Materials..					
Attendance.....					
Health.....					

Mental Maturity Tests:

Test	Date	Verbal	Non-Verbal	Total IQ	Verbal %ile	Quant. %ile	Total %ile

Achievement Tests:

Test	Date	Reading	Arith / Math Fund. Reas.	Lang. Writing	Social Studies	Science

Nurse's Comments, Significant Health Data:_____

_____

Principal's Signature_____

Behavior Descriptive Scale

Name: Lee Date: May

1. Is his behavior unique in any way? Explain.

   Very good self control. Ready to help others, whether it be an explanation of a problem, telling words to a reader who is stumped, or helping physically with the carrying of a heavy load.

2. To what degree does he exhibit independent work habits?

   Can work almost entirely independently. A brief word of explanation or direction or a casual suggestion by the teacher is enough to start Lee on a productive pursuit.

3. Does he have any health problems?

   No.

4. How does he relate to others?

   He is friendly and is becoming more outgoing, overcoming a former shyness.

5. Does he exhibit considerable maturity? In what ways?

   He exhibits maturity during group discussions by contributing good ideas for group and individual behavior.

6. To what degree does he exhibit self-control?

   When a few children get noisy and talkative, he usually remains quiet and remembers rules and standards of behavior set up by the group and does not usually allow others to distract him.

7. What are his strongest academic areas? Any special problem areas?

   His strongest academic area is mathematics. He frequently computes rather involved number facts in his head.

8. Is he usually composed? If not, explain.

He is usually composed. At the beginning of the year Lee cried several different times when he saw a different bus driver. He was upset by being let out of the bus at a different stop than usual. Each time he saw the substitute driver, he would start to cry.

9. What other observations would you like to relate?

When Lee first came into our classroom, he was very hesitant, shy, and quiet. Now he shows a nice gain in self-confidence and is more at ease when speaking before the group.

Instructional Services

Gifted Child Program -- Parent's Description of Student

Student's Name: Lee Date:

School Teacher Grade 1st

What are your child's special interests and hobbies? Please describe.

Collects and races midget cars; enjoys playing with large building blocks, erector set. Has built two tree houses. Has two dogs, cats, turtles -- hatching bobwhite quail eggs now. Raises vegetables. Plays tetherball, football, basketball, games of skill and chance (card games, monopoly, scrabble, etc.). Swims.

What are your child's reading interests (kinds of books he enjoys)?

Enjoys all kinds. Uses the Britannica Junior Encyclopedia almost daily. Enjoys science books about animals and outer space. Favorite

books this year included Charlie and the Chocolate Factory, Lassie Come Home, Winnie the Pooh, Wizard of Oz, Robin Hood, Black Beauty, Bible hero stories and the Dr. Seuss series of books.

Does he have any special problems or needs?

Lee is sometimes very sensitive and may be shy of new situations. He has no special problems, however.

Does he have any special talents? Please describe.

Not at this time.

What special opportunities has he had -- trips, lessons, etc.?

Lee has traveled to Mexico, San Diego, San Francisco, Spokane. He has taken trips by small plane, jet, train, and helicopter. He has visited Mt. Palomar, the Griffith Park observatory, Marineland, Disneyland, historical aircraft and air race shows and has explored tidepools along the coast. He has had swimming lessons and will take a painting and drawing course this summer.

What does your child prefer to do when he is alone?

Lee reads; works out math problems of his own design; plays "board" games (taking both sides); makes art projects; plays with soldiers and equipment staging battles; builds with blocks, "Lego" bricks, tinkertoys, erector set; plays ball games outside; rides a bike, digs a sandbox, etc.

How are his relationships with others?

Very good.

This questionnaire was completed by: Father ___ Mother X
Other ___

Instructional Services

Revised Stanford-Binet Examination Report

Student's Name: Lee School: _____ Teacher: S Grade: 1

Sex: M Birthdate: _____ Binet Form: 60LM C.A. 7-2 M.A. 11-6 IQ 163

Reason for Referral: Possible gifted

Vocabulary age: 10 years

Range: Basal Year X, Ceiling Average Adult

Successes above the M.A.: 5 digits reversed (Year XII), Plan of Search (Year XIII), Sentence Memory (Year XIII), Bead Chain Memory (Year XIII), Induction (Year XIV), Directions (Year XIV)

Discussion of test results:

1. Spacial orientation (14 years). Following given information, he located correct directions.
2. Analytical thinking (14 years). By observing a sequence of related activities he was able to detect the guiding principle.
3. Visual memory (13 years). A nine-bead chain was reproduced from memory.
4. Immediate auditory recall (13 years). A 15-word sentence was repeated correctly.
5. Reasoning (13 years). A good plan was formulated to find a lost article.

Teacher's comments: (See Referral Form.)

Summary: Lee's ability, which falls at the upper limits of the "Very Superior" range on the test, indicate he is capable of functioning on a far more abstract level than most first graders. He requires less work at the concrete level and can arrive at conclusions more quickly. His mature, confident attitude and effortless concentration suggest healthy personality development. Motivation seems to be intrinsic so that any pressure to learn is unnecessary.

H...Psychometrist

Instructional Services

Pupil Interest Inventory

Lee	1	
Pupil	Grade	Date

School	Teacher

1. What school subjects do you like the best? Number these school subjects from 1 to 9 to show the order in which you would choose them:

2	Reading	3	Art		Foreign Language
6	Music	4	Science	1	Arithmetic
5	Social Studies		P.E.		Other

2. Are there any school subjects not taught at your school that you wish were part of the school program?

I'd like to have more fun work than we could do, something for a quiet activity.

3. Do you have a definite time to study at home?

   The third-grade arithmetic book keeps me busy. I just work on it any time I feel like it.

4. How many books do you read in a week at home?

   About 14 a week. I read every day.

5. What are the names of some of the books you especially enjoyed reading in the last few years?

   Charlie and the Chocolate Factory. I'm on the 21st chapter.
   All around You, Under the Roof, Ant and Bee Book, Harold and the Purple Crayola.

6. How often do you use the Public Library? Underline the answer that is right for you.

   Never Once in a while Every week Every two weeks

   I just went to the school library when we had a library here.

7. How often do you read the newspaper? Never Once in a while Regularly Sports and weather.

8. Underline the parts of the newspaper that you read often:

Advertisements	Radio	Editorials	Comics
Tides	Theatre	Society Page	Local News
Weather	Television	Sports	World News

9. Do you like to read magazines?

   McCalls -- the one with the paper dolls.

10. Do you often read comic books? No What comic books do you read?

11. Do you listen to the radio every day?_____ What kind of program do you like best?_____

12. Do you have a television set in your home? Yes About how many hours do you spend watching television on a school day? On a week-end? Please list your five favorite television programs.

Sunday. I don't watch every single day. Lassie, Walt Disney.

13. How often do you go to the movies? Underline the best answer for you.

Never Two or three times a year Two or three times a month

14. Underline the names of the places where you have been. Check the ones you would like to visit again.

Natural History Museum	Airport	A park on the peninsula
Junior Museum	Art Gallery	A broadcasting station
Observatory	Planetarium	Aquarium - Marineland
Ball game	A dam	Ferry
Zoo	A manufacturing plant	Beach
Opera	Lighthouse	Circus

15. Have you ever visited any foreign countries?

No.

16. Check any clubs or organizations to which you belong and add any which are not listed: Boy or Girl Scouts, Cub Scouts, Brownies, Church Choir, School Orchestra, Campfire Girls, Blue Birds, Gray-Y, Student Council, School Chorus, Junior Hi-Y, Little League. No.

17. Do you take any kind of lessons now?

No, but I will be taking painting this summer.

18. Comments:

Report of Parent-Teacher Interview

Name: Lee Date:_____

The parents were interested to hear about the results of the tests and to learn of the high IQ score of 163. The father expressed the feeling that although this was a very high score, it was just one test and it could very well be that Lee's interest in and additional experience at home in mathematics contributed to his success. The father said he had encouraged Lee in work with numbers and abstract problem solving and had recognized his talent in this area particularly.

The mother remarked that she felt that the father saw this side more because that was the father's major interest; however, she had recognized Lee's superior ability in reading and language and had encouraged and helped him in these fields, the mother being a journalism major in college.

The parents both felt quite strongly that it was most important at this age and during the elementary school years for Lee to develop socially, emotionally, and physically at the normal rate, if possible, with children of his own age. Although it was not mentioned by the teacher or principal, who joined in during the later part of the conference, the father stated that he was opposed to acceleration and would rather see Lee graduate from high school at age 18 rather than as a "12 or 14 year old freak."

Mr._____, the principal, gave a brief explanation of the Gifted Child Program in our district and a description of some of the curriculum planning in the upper grades.

The mother expressed an interest in participating in the parent's group in the district and took the name and telephone number of person to contact who is secretary of the group. The mother stated that Lee was highly interested in the home project of incubating bobwhite quail eggs and that he was taking the full responsibility for keeping the daily record, controlling the temperature, turning the eggs, etc. She was helping by doing the later-hour egg turning each night at 10:30 P.M. It was through the kindness of my friend Mr._____that we secured an incubator and eggs for Lee's project.

The mother said that they were looking forward to a fun summer. Lee would be taking painting lessons and going swimming and would no doubt continue to read independently for fun.

Teacher's Description of Child

After a short time in first grade, it was obvious that Lee was the top performer in the group and was no doubt highly gifted.

Lee is a good-looking boy. He is a tall, slender blonde with alert blue eyes and has a few freckles across his nose. Although Lee was rather shy and reserved upon entering first grade, he has gradually become more outgoing and has developed a relaxed, comfortable attitude. He hesitated to attempt something new at first, particularly in outdoor organized games or using outdoor equipment like the horizontal bars. Now, he will lead a group over to the horizontal bars. He has practiced at this until he now can swing across the bars with good coordination.

His unique abilities include computing complicated numerical problems in his head. He is quick to solve thought problems which are on a much higher level than first-grade math. He is very sharp on seeing the point and coming up with answers.

There have been many occasions when Lee has exhibited a remarkable memory. He reads fluently and seems to grasp new words automatically. He has read 20 to 30 books on a variety of subjects. He has many interests, and some of his recent books have been science books such as All around You, The Beginning Knowledge Books, etc. Lee is able to do almost any type of comprehensive follow-up work with a brief explanation. He follows directions very well and is very willing to help others if so directed.

He enjoys keeping records and writing letters and reports rather than any creative writing. He has an excellent speaking vocabulary. The test results we recently received disclosed an IQ of 163.

Lee is well liked by the other children. He likes people and is quick to assist others when they are hurt or need help in any way.

STEPS TOWARD SUCCESSFUL IDENTIFICATION OF THE GIFTED AND TALENTED AMONG THE DISADVANTAGED*

The importance of identifying giftedness among disadvantaged children is apparent in the number whose abilities would be wasted otherwise. They are a larger population than the economically privileged, they reside in every community, and they appear in all ethnic groups. The assumption has been made too often that gifted children are not to be found in certain groups; as a result, they have remained unidentified and largely invisible.

During the past two decades, the problem of children from impoverished environments has become increasingly an urban problem, although it will not become exclusively so. Many rural families have moved into large cities, where they have been forced into poorly paid occupations or onto welfare rolls. Thus, the search for giftedness among the economically disadvantaged must receive special emphasis in cities, where the poor often are ignored.

One striking exception is the migrant child, who moves constantly from one location to another while his family follows the harvest. His problems are compounded by the repeated interruptions of his schooling and the lack of a stable learning environment.

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*The content in this section should be used in context with other parts of the manual rather than in isolation.

Economically deprived children come in all colors. In terms of absolute numbers, the majority are white. The highest proportions, however, are among the various minority groups. Identification among minorities is an urgent priority, therefore, but it should not become an exclusive one. Failure to identify gifted children among minority group has been widely publicized and the problem is grave. But the assumption that all minorities are disadvantaged is naive, as is the failure to recognize that disadvantaged children come from many groups. Any identification effort which concentrates on a single ethnic population becomes partial and selective. Attention should be given to all disadvantaged children with poverty and environmental limitations rather than color as the criteria.

The problems of minority children often are related to discrimination. Many times the failure to provide for these bright children leads to frustration and uncooperative behavior; comments are made about children who refuse to take part even in appealing activities. Stallings (73) reported that the black president of the Seattle community colleges was told by his first-grade teacher that he would never complete high school.

The need to recognize giftedness in minority groups is dramatically illustrated by adults, unrecognized as children, who overcame seemingly insurmountable problems and negative attitudes to attain distinction. The remarkable contributions of blacks and Indians are eloquently described by South (72).

No one who has read Richard Wright's Black Boy, Ann Moody's Coming of Age in Mississippi, or Margaret Walker's Jubilee could ever doubt that there have been, and are today, growing numbers of gifted children among minority populations. The Autobiography of Malcolm X, Piri Thomas' Down These Mean Streets, Eldridge Cleaver's Soul on Ice, and M. Scott Momaday's House Made of Dawn show that the adult authors of these present-day masterpieces must have been gifted children.

Why is it that such people as Doctors Daniel Hale Williams, first to perform open-heart surgery, and Charles Drew, the discoverer of the secret of preserving blood plasma, both blacks, remained unknown until their adulthood, when their genius could no longer be ignored, but screamed for recognition? The answer is simple: their race. It has remained a relatively hidden fact that the non-Caucasian populations of the world have borne some of its greatest geniuses. This can be demonstrated from history, a history that reveals the fact that the nonwhite people of Asia, Africa, South America, and the Mediterranean countries have given to the world an immeasurable wealth of knowledge and an enhancement of the cultural history of civilization.

Henri Christophe, King of Haiti; Toussaint L'Ouverture, Haitian patriot and martyr; Frederick Douglass, George Washington Carver, Marcus Garvey, Malcolm X, Martin Luther King, Jr. -- could these extraordinary black leaders have been other than extremely gifted children? One cannot suppose, even attempting to extrapolate back through the generations, that all of these individuals were recognized as gifted during childhood, and their genius nurtured to full bloom. On the contrary, one knows that their genius would probably have remained unknown if their natural gifts had not driven them, each in his own way, into the forefront of human affairs. How many geniuses are waiting to be discovered among the youth of today? There are still not many formal attempts to stimulate genius, showcase it, and then give it a field of operation. Therefore, one still has to rely heavily on the printed word, books, and collections of books to provoke and promote this genius from youth so that it will not languish or get frostbitten in penal institutions.

Some of these individuals, but not all, came from economically disadvantaged backgrounds. But it is a fact that large numbers of minority people are still economically disadvantaged, and the search for giftedness must be carried on persistently in these groups.

The majority of studies which purport to show that Negroes are less intelligent than Caucasians do not take into account social conditions, and thus social class and race are confounded. Unfortunately, studies of ethnic and socioeconomic factors have concentrated on group differences as found by group tests and have ignored similarities, overlap, and the range of individual differences within groups. Reported group differences appear to be caused by deprivation rather than by innate factors. Jensen (33) cited a number of environmental factors, including health problems from birth on which are more frequent in low socioeconomic and certain ethnic groups and which tend to contribute to differences in measured group IQs. He found it of interest that Jewish immigrants, whose offspring had higher IQs than the general population, also had lower mortality rates and fewer birth problems than other ethnic groups, either native or foreign-born. Hess (27) has pointed out that environmental conditions such as educational level of the mother and her marital status appear to have an influence on the Stanford-Binet performance of Negro children.

Deprivation affects people of all colors. Blumenfeld (6) found that Negro National Merit Scholars tended to come from

higher socioeconomic backgrounds and better equipped schools than the average black student. Bloom (5) and others have pointed out the relationship between favorable environment and high group testing ratings, and the conversely low test ratings of deprived children. Vernon (80) remarked on the decrease of performance in Indian reservation children who enjoyed few opportunities for learning. The regression of performance was reported by Miller (19). who found that nearly three times as many superior children with Binet IQs of 116 plus were found in the primary grades of five schools with predominantly poor Negro children as in the intermediate grades. Deutsch also has written on the loss of ability, as have a large number of others.

While recent studies have indicated decrease in school achievement and loss in IQ rating among minority groups, earlier studies showed the same phenomena among poor white children (35); undoubtedly the condition still exists. Various writers have speculated on causes such as limited learning opportunities in the home, apathy, absence of the father, poor nutrition, lack of self-esteem, fear of making errors, timidity, general hopelessness within the environment, subservience, lower aspirations and expectations, and lack of confidence in oneself and one's future. Numerous writers have referred to the low self-concept among the economically disadvantaged, although this is less true of black children since the emphasis on racial pride and "black is beautiful" has come to the fore.

Studies in the 1950s and early 1960s largely supported the

notion that the self-concepts of Negroes were lower than those of whites and that Negroes suffered from feelings of frustration and inferiority as a result. Zirkel, however, pointed out that 17 studies completed between 1967 and 1971 revealed no significant differences between the self-concepts of Negro and white students; in fact, in a number of studies, the self-concepts of Negro students surpassed those of white students from similar socioeconomic backgrounds (93).

In other minorities, such as Mexican-American, Puerto-Rican, and Indian children, mixed results have been obtained. In most cases, the self-concepts are below those of white children, but variations exist and the results differ from study to study. One writer suggested that results differed when comparisons were made of self-concept within one's own group as contrasted to the attitude of the society at large. Another suggested that the self-concept might be nothing more than our own stereotype projected onto the child (93).

What are the special problems faced by children of the poor? Allison Davis has described them eloquently:

> ... [Children at the lowest economic level] need more food, better housing, more space in the bed, since three or four or five have to sleep in one bed. We know that they do not get minimal medical, dental, or eye care; that they do not have a place to study at home, or parents to provide them with the books or the incentive to read....The slum child also has his share of fear and worry. His family is more often struck by disease and by the separation of husband and wife. Their chronic poverty breeds fear of eviction. They often move every three or four weeks. The child's most constant fear is the fear of not getting enough to eat....On the other hand, his family and his gang teach him not to fear a fight ...injury or even death....He also grows up fast....He is not protected from the crises of life. He sits with the ill and with the dying. Even as a six-year-old he listens to

> family discussions of unemployment, of desertion, of adultery (14).

Another problem and a contributing factor in lower measured achievement and potential may be the teachers who influence the child directly day by day. If teachers assume that the pupil is not capable of high-level performance, they are unlikely to give him proper opportunities to demonstrate his true abilities. Erroneous judgments may be made on the basis of observed behavior. Even more insidious is the view held by some that giftedness is not present in certain populations and that therefore search and identification are of no concern.

Problems of understanding, communication, and recognition are not necessarily solved by assigning teachers who come from the same ethnic or socioeconomic background as the child. A teacher who has left the environment may be highly punitive toward the child rather than supportive.

Errors of judgment may also be made because of the way in which a child communicates. The child who is taught, either directly or indirectly, to be deferential to teachers or other adults tends to minimize his worth and to be less assertive than other children. If he speaks a different language at home his true potential may not be recognized. Bilingual children may have problems although it is important to know whether the child has been bilingual from infancy or has entered the English-speaking culture recently. Those who are brought up from early infancy as bilingual are not handicapped when

compared with English-speaking children (12).

The problems of bilingual children also differ widely. If the child is bilingual only at school and uses the minority language exclusively in the home and neighborhood (where he communicates most), he may do less well on verbal tests than on performance tests (9). This problem is faced by the Indian child in certain remote areas, by recent immigrants, and by many Mexican-American children. The problem of English as a second language is one which is not shared by the Negro child.

Bransford (9) has pointed out that twice as many Mexican-American children are in classes for the mentally retarded in several southwestern States than children from other ethnic groups. Most of the same States have few programs for gifted children, which makes the likelihood of identification in this population remote.

The continuing failure to identify and provide for gifted minority children has resulted in their failure to seek higher education. In 1957, Plaut (52) found that only one tenth of able black students entered college and that most attended institutions with poorly endowed programs. In 1963, despite assistance for numbers of black students, they accounted for only one percent of the college population. The proportion of all minority youth in college is still quite low.

One final item is important when considering special problems in the identification of economically disadvantaged children: no group

is homogeneous, and no generalization across group lines is valid. Within a Chicano group, an Indian group, or in a mixed population, some children will perform well on tests, some will do poorly, and most will be within the middle range. Looking upon any group as homogeneous is an error, which is obvious when one considers the Navajo-speaking child and the urban Indian. The Negro child is not like the Mexican-American child, even in comparable economic circumstances. While cultural context is significant, the vast differences within the context cannot be ignored. The tendency to apply group sociological findings and to think in group terms rather than to center on the individual has caused much of the indifference to giftedness among the disadvantaged.

Testing Developments

Attempts to devise tests which are less discriminating against disadvantaged or minority children have produced mixed results. Opportunities to practice in testing situations have been unproductive. Testing is an unfamiliar experience for the young disadvantaged child. When he has not been involved in problem solving situations or has not been encouraged to interact with others, he is at a disadvantage. But even when given direct practice with CTMM type verbal items, no significant gains were made by 288 middle-elementary-grade disadvantaged children (20). Anastasi remarked that certain non-verbal tests are no more culturally fair than verbal tests (27). Indeed, Vernon points out that most psychologists

have concluded that there is no such thing as a culture-fair test (80). Practice with verbal tests does not compensate for long-established environmental deficits. Anastasi's comments are borne out by the findings of Lesser, Fifer, and Clark that Negro children performed better on verbal tests than on tests of reasoning, number, and space, as well as by those of Higgins and Sievers, who found that 789 seven- to ten-year-old Negro children performed significantly better on the Stanford-Binet than on the Raven Colored Progressive Matrices (19). Vernon cites a number of studies which indicate that Negro children do less well on nonverbal tests than on verbal materials (80). Essentially the same patterns of achievement have been noted in performance on a group test battery by black, white, and Mexican-American children.

The question of whether divergent thinking tests identify independently of intelligence tests and therefore would be useful with economically deprived or minority groups is still open. Some evidence suggests that black disadvantaged children in the middle grades through high school excel whites on figural fluency, flexibility, and originality, while whites tend to excel on verbal measures (76). On the other hand, when achievement, rather than social class or color, becomes the common factor on which comparison is based, high-achieving black lower-class children performed similarly to high-achieving white middle-class children on creativity measures (24). Another study of more than 400 high school students found the relationships

between divergent thinking and both school achievement and social class lower than those found between IQ and those two variables (48).

Personal factors do not seem to affect test performance. One study demonstrated that performance on the WISC was not affected significantly by the presence or absence of verbal approval by the examiner (18). The administration of the Binet in Negro dialect produced no benefits in a study of severely disadvantaged black four-year-olds (58). The difference of white and black voices appears to have an impact on the IQ test performance of white children but not that of black children (17).

The greatest errors occur when group tests only are used for identification. Because of predictably wide variability in group test performance among disadvantaged children or those from different backgrounds, it is important that those seeking to reduce the loss of talent avoid the use of rigid cut-off scores. Selection should not be based on borderline performance on traditional group tests, especially if environmental opportunities are extremely restricted.

Desirable testing conditions for children of limited test experience should include individual administration, minimum distraction, interesting tasks, clear directions, adequate time for response, and continuous encouragement.

The question often is asked whether giftedness can be found through traditional measures. Some indication that it can, given the will to do so, came from the early work of Jenkins (31, 32). He used traditional screening measures to find gifted children for Binet testing

in predominantly black Chicago schools. Jenkins also examined data from thirteen studies on more than 22,000 black children and found that one percent had IQs of 130 or more. If group tests were the basis for his estimate (a safe assumption for those numbers) the true number of gifted should have been considerably higher.

Numerous efforts are underway to find better tests. Jensen has advocated tests to measure the disadvantaged child's aptitude in associative thinking; Wallach is developing such tests to measure creativity (82, 84). Rohwer is working on paired-associates tests containing familiar items which call for response at increasingly complex conceptual levels. The Peabody Picture Vocabulary Test and the Raven Progressive Matrices favored high socioeconomic groups and the difference in performance of children from different backgrounds increased from kindergarten to third-grade levels, whereas Rohwer's experimental tests produced relatively small differences which decreased significantly by third-grade level (67). Paired-associates items have been criticized for measuring only rote learning; new items which require the production of sentences and ideas are now being developed.

A modified Binet scale containing items on which black children are more likely to succeed has produced a very slight increase in their IQ (10). Detailed reports of this work and of studies under USOE auspices with Chicano children in Texas will be forthcoming. Stallings (73) has developed a series of culture-specific memory items. The items, which are administered individually, are developed from urban ghetto experiences and are used for the screening of potential. Addi-

tional studies of his items are currently underway (74). Williams has developed culture-specific tests for high school students which clearly favor blacks (89). The results emphasize the need for identification procedures which do not discriminate against any group.

A frequent suggestion is that there should be no time limit on tests and that tests be developed which make use of the child's environment, especially his language patterns (59). Newland has found that differences between Mexican-American and Anglo children are reduced when standardized group tests are not timed and that the process-oriented items of his Blind Learning Aptitudes Test produce similar results for large numbers of white and black children (45).

Training in processes important to testing success has yielded promising results in studies with widely differing groups of isolated Indian children (69) and with young disadvantaged urban children (34). These studies indicate that relevant skills can be learned and test performance improved.

Interest in Piaget-based tests has been high recently and is increasing. As yet, tests are new, and studies fragmentary and contradictory (81, 88).

Goldschmid, Bentler, and others are developing scales which ultimately may test sequential development in mental processes, on the basis of Piaget's work. Such scales are at present limited in scope and do not give the broad sampling of the Binet or Wechsler scales. Furthermore, the time required for administration is extensive. During the next decade, however, it is possible that we will have scales to

sample complex levels of development more accurately than do the present Binet and Wechsler scales, which are based on statistical norms. This is a reasonable hope, if the widespread activity at the present time is an accurate indicator (42).

Hopefully new tests will provide sufficient scope and complexity to identify the gifted. A number of studies have shown that bright children are able to define problems and to produce hypotheses more readily than the average; when the possibilities are restricted, the differences between the very bright and the average decrease.

Meanwhile, the Stanford-Binet and its various derivatives sample the mental efficiency of western children very thoroughly (80). Other tests, such as divergent thinking measures, performance measures, the Raven, the Harris-Goodenough, or culture-specific tests should be helpful in assessing other factors.

If tests are used within the context of other information about a child, the danger of misuse diminishes. Tests give some information about a child's status now. In the case of a child from a severely restricted background, tests have to be interpreted the way one would interpret the weight of a poorly fed child. If the scales show that the child is fifteen pounds below normal weight, the scales are not at fault. They merely show his present weight in relation to the norms for his age. With proper care and feeding, subsequent weighing should show improvement. Similarly, a test may indicate a spuriously low achievement compared with a child's potential. But

this information is useful in determining the present status of a child and in planning his future. This is why it is important that children from deprived backgrounds be assessed by a psychologist. Interpretation of status and potential should always be as carefully done as possible (12).

The problem of testing economically disadvantaged children accurately will probably not be solved by culture-specific tests because of the many cultural variations even within single minority groups. In addition to better tests, massive change is needed to reduce the glaring inequities in nutrition, health care, housing, and learning opportunities which are the lot of millions of young children.

It is well known that children of low socioeconomic status come to school with inadequate learning tactics. The lack of those skills becomes a cumulative lack unless intervention occurs.

Language is essential to thought and reasoning as well as to effective communication. Longitudinal learning opportunities pointed especially toward language development should be systematically developed so that the impact of class differences is minimized, and such opportunities should be initiated at the earliest possible time. The earlier and broader the possibilities for language development, the greater the possibilities that the child will use his full intellectual capacities.

As a result of his work, Rohwer (67, 68) has advocated that young black children from poor families be exposed to curricula which

will enable them to use their capacity for imaginative thinking through concrete and specific instructional programs. These children particularly need to acquire information and skills missed because of their inadequate environment. The learning should be tailored to the child's learning style, whether formal or imaginative.

Meanwhile the counsel of Butcher is sensible:

> It would be wise to think of an IQ . . . as preliminary to detailed diagnosis.
> Concern about social class factors may cause us to forget about knowledge concerning individual differences and throw the baby out with the bath water (12).

Until the new tests are developed and validated, careful and complete individual studies by qualified examiners seem to be the best answer. Piaget-type tests which measure an adequate range of sequentially complex thought processes will be available eventually (42). Until then, our best tests and case study materials should be used to seek the children with outstanding promise among the disadvantaged. Formal requirements can easily be waived, as is the case in California and some other States, and children certified as having special promise can be provided for in accordance with their particular educational needs and potential.

Forms for Screening

Many school systems have developed procedures and forms for referral and identification of children who differ from the norm. The material which follows can be used to alert teachers to various handicaps, and psychologists to added testing possibilities.

Identification of Educationally Disadvantaged Pupils

Los Angeles Unified School District

In the identification of gifted pupils under provisions of California Administrative Code, Title 5, Section 3822, the Identification and Placement Committee considers evidence in three areas:

1. Educationally Disadvantaged -- "The report of the committee shall specify the disadvantage or disadvantages to which the pupil is subject." These are based on "all available and pertinent evidence of a child's language, cultural, economic, or environmental handicaps that have in the past and may in the future interfere with his success in school, restrict the development of intellectual and creative ability, and prevent full development of his potential."

   Specification of disadvantages which may qualify a pupil are suggested as follows:

   Environmental Handicaps

   Attendance at schools which are overcrowded, on half-day double sessions, etc.

   Transiency in elementary school years -- at least three moves

   A home situation affording little enrichment or stimulation

   Parental attitude toward education demonstrating rejection, indifference, or overconcern

   Language Handicaps

   Little educational opportunities in dominant culture language

   Bilingualism at a depressed functional level in both languages

   Lack of verbal intellectual stimulation due to limited language facility

   Dialectal differences affecting learning -- acting as a barrier to social mobility

Cultural Handicaps

Inability to function meaningfully in the dominant culture because of limited exposure to that culture

Subculture standards conflicting with dominant culture, involving peers, parents, and community

Lower self-esteem patterns resulting from self-comparison with dominant culture standards

Lack of cultural experiences stimulating intellectual growth

Economic Handicaps

Residence in a depressed economic area or in one with high concentration of poverty

Low family income -- dependent on outside help

Large family living at subsistence level

Pupil employment necessary to maintain family's economic position

Inability to afford books and other reading materials or to provide varied experiences outside the home.

2. Underachieving Scholastically -- "By comparing the pupil's general intellectual capacity with his achievement on the basis of all pertinent information related to cultural disadvantage," it is the judgment of the committee, all concurring, "that the pupil could achieve at the upper two percent (2%) level were it not for his cultural disadvantage."

The following criteria are used to evaluate a pupil's achievement in relation to his potential:

Group achievement test scores Cooperative Primary Reading Test Stanford Reading Test California Achievement Test	(Stanines below 9 and particularly those below 7 would indicate lower achievement than would be expected of a gifted pupil.)

Teacher-made tests that would show a relative lack of academ progress, in comparison to what gifted pupils would be expec to achieve

Teacher observation and evaluation of daily work showing a relative lack of quality and depth in the pupil's response to academic learning areas

Report card marks and cumulative record entries showing a tendency toward average or poorer achievement in academic areas, or an inconsistent pattern of achievement

Parental evaluation of achievement, expressing opinions that the pupil is not achieving his full potential

Pupil self-evaluation, indicating a desire to achieve at a higher level in academic areas

Psychologist evaluations of all data gathered from above sources, supplemented with an individual evaluation of the pupil.

This evaluation of the pupil's achievement and academic potential may be accomplished in various ways:

... through the use of tests

Wide Range Achievement Test
Gilmore and Gray Oral Reading Tests
Peabody Picture Vocabulary Test
Raven Progressive Matrices

... by rescoring of the Binet as developed by Dr. Kay Bruch (Creative Binet)

... through analysis of scoring patterns on the various Wechsler tests, especially in performance areas

... through the use of supplementary performance tests

Columbia Mental Maturity Test
Goodenough-Harris
Kohs Blocks
Grace Arthur

... by innovative instruments developed by the individual psychologist to evaluate such characteristics as originality, creativity, and verbal fluency.

3. Mentally Gifted -- The Code specifies that a pupil must qualify in one of these areas:

"Precocious development and maturation in the preschool or primary period"

"Outstanding scholastic accomplishment at any point in school career"

"Unusual resourcefulness in coping with responsibilities, opportunities, deprivations, problems, frustrations, obstacles, lack of structure and direction, or overly structured settings."

"Outstanding achievements, skills, or creative products."

"Scores at or above 98% on non-verbal (performance) scores of individual intelligence tests approved by the Superintendent of Public Instruction."

Some of the observable characteristics which may indicate giftedness are as follows:

Shows independence of action

Takes initiative readily

Demonstrates fluency in verbal and non-verbal communication

Shows imagination in thinking

Is flexible in approach to problems

Demonstrates abstract thinking

Learns quickly through his experience

Retains and uses ideas and information well

Shows curiosity and a desire to learn in daily work and activities

Gives evidence of originality and creativity in patterns of thinking

Responds well in visual media

Shows leadership ability in his peer group

Exhibits responsible social behavior

Has varied interests

Is able to generalize learning to other areas.

Suggested Procedures in a Search for the "Disadvantaged Gifted"

Each school should seek the cooperation and involve the active participation of its staff, faculty, and community resource personnel in developing guidelines and identification procedures. Here are suggested ways to begin this project:

... Present the project to the faculty. Experience seems to indicate that this presentation by a representative from the area counseling and psychological services staff can best be made to small groups, such as faculty meetings by conference periods.

... Prepare a local search sheet on which teachers may recommend possible candidates.

... Set up a school screening committee of about six members to help define "gifted potential" criteria relevant to the particular school and its environment. This committee will screen all candidates suggested by the faculty and make final recommendations for those who seem most qualified for intensive psychometric evaluation.

... Select a local school coordinator who can work with the principal, head counselor, and psychometrist to carry through both identification procedures and curricular programming for these young pupils.

... Suggest identification within one grade level only at this time. Seventh grade is recommended for the initial identification project.

... Request assistance from the Coordinator, Programs for the Gifted, and Field Service Center Teacher Consultants, Programs for Gifted, in developing the new program.

... Explore resource possibilities the school may have which could be used in setting up "new" modified curricula for those identified. Physical facilities should be considered. However, teachers with special abilities, sensitivity, and creativeness are essential for a successful program, and they must be carefully selected.

... Plan for specific innovative classes in the school's master schedule which will challenge these pupils' unique abilities and needs.

... Investigate the possibility of involving local college and university personnel with the project, specifically for assistance in development of new curricula and other participation.

It should be realized that the preceding suggestions are made with the limitations of district resources in mind. The recommendation that initial identification be deferred until seventh grade is far short of desirable practice, for example. Identification at the earliest possible time would be a better policy, obviously.

Los Angeles Unified School District

Counseling and Psychological Services Section

State Gifted Program -- Separate Criteria Checklist

Name of Pupil_____ Grade_____ Date_____
Last First

School_____ Teacher_____

Subject (Secondary)_____

1. Evidence of Possible Giftedness

   a. Please indicate the degree to which the pupil exhibits the following characteristics. (Mark only those characteristics that have been observed.)

	Slight	Moderate	Marked
1. Takes initiative and shows independence of action	_____	_____	_____
2. Shows leadership ability	_____	_____	_____
3. Exhibits adaptive social reasoning and/or behavior	_____	_____	_____
4. Is alert, observant, shows curiosity	_____	_____	_____
5. Shows motivation and drive, enjoys challenge	_____	_____	_____
6. Learns easily through experiences	_____	_____	_____
7. Retains and uses ideas and information	_____	_____	_____

	Slight	Moderate	Marked
8. Can transfer learning from one situation to another	_____	_____	_____
9. Demonstrates fluency in verbal expression	_____	_____	_____
10. Has a fund of information and range of vocabulary	_____	_____	_____
11. Has varied interests	_____	_____	_____
12. Shows imagination, originality, and creativity	_____	_____	_____
13. Is flexible and resourceful in problem solving	_____	_____	_____
14. Demonstrates abstract thinking ability	_____	_____	_____
15. Has a sense of humor	_____	_____	_____
16. Demonstrates persistence in tasks	_____	_____	_____
17. Shows facility in learning English, if bilingual	_____	_____	_____

b. Other evidence of giftedness (i.e., art, music, drama, mechanical aptitudes, athletics, etc.)

_____

_____

_____

c. Tests of academic potential

Group Test	IQ	Individual Test	IQ	Verbal IQ	Perf. IQ

2. Evidence of Handicap (Check all factors that apply to pupil.)

a. Environmental Handicaps

... Limited experiential background_____
... Irregular attendance_____
... Transiency in elementary school years - at least 3 moves____
... A home situation affording little enrichment opportunity____
... Home responsibilities interfering with learning activities_____
... Other (Specify)_____

b. Language Handicaps

... Lack of proficiency in any language_____
... Limited opportunity to acquire depth in English_____
... Non-standard English constituting a barrier to learning_____
... Other (Specify)_____

c. Cultural Handicaps

... Limited experiences in dominant culture_____
... Few experiences in any culture which stimulate intellectual growth_____
... Subculture standards in conflict with dominant culture standards_____
... Other (Specify)_____

d. Economic Handicaps

... Residence in a depressed economic area_____
... Low family income at a subsistence level_____
... Necessary pupil employment interfering with learning opportunities_____
... Family unable to afford enrichment materials and experiences_____
... Other (Specify)_____

3. Evidence of Underachievement

The pupil's achievement should be evaluated in relation to his potential. In this regard, a pupil who is achieving at an average or above-average level in comparison with the group may be underachieving in relation to his own potential.

a. Check factors below that give evidence of the pupil's under-achievement:

... Teacher observation and evaluation of the pupil's daily work reveals a relative lack of quality and depth._____

... Report card marks and cumulative record entries show a pattern of inconsistent achievement. _____

... Parents express opinions that the pupil is not achieving to his full potential. _____

... Pupil expresses a desire to achieve at a higher level in academic areas. _____

... Standardized achievement test data listed below show a discrepancy between pupil's potential and his academic achievement. _____

... Other (Specify)_____

b. Achievement Test Data

Group Achievement Tests	Grade	Stanine	Individual Achievement Tests	Grade	Grade Level

Some cautions are in order regarding identification of the disadvantaged:

1. As Miller has said (43), not every impoverished home is illiterate; many wealthy homes own no books or at least no books that have been read. Money per se is not a mark of cultural enrichment. Many poor children are patrons of libraries and other facilities, as are their families.

2. Ethnic groups should not be viewed as if all members of a particular group come from the same background of the same socioeconomic level. The overlap from group to group is considerable, and the search

for potential should go on in all groups. Abandoning the search for gifted children in one group to concentrate on another is a mistake since identification is highly inadequate in all groups.

3. Abbreviated tests are not equal to full-length tests; nor are sections of tests in combination equal to those from which they are derived. Before a test is used, its validity for the particular purpose should be determined.

4. Individual tests and complete study should be the rule for economically disadvantaged children.

5. Special stress on nomination and identification should be made in less favored areas of the community. Unfortunately, there are still teachers who, believing their pupils have a low potential, treat them accordingly. They also assume that these pupils will eventually occupy jobs of limited skill and low socioeconomic status. Those who work for identification of gifted children among the poor will have to expend extra energy in persuasion, in-service education, and direct observation.

6. It should not be assumed that limited opportunities for learning permanently restrict the achievement of a child. The recently reported studies in Guatemala by Jerome Kagan are a case in point. Test results and other data should be seen as a portrait of a child at that time. Numerous studies have shown that remedial learning for deprived children increases their test performance.

7. Values, attitudes, opportunities, conditions for success, health, and opportunities for learning differ widely from child to child.

A gifted child from a deprived background cannot be thrust into a group of other gifted children and be expected to function successfully, unless his deprivations are attended to and eliminated over a period of time and unless grouping and group size permit highly individualized planning.

SUCCESSFUL PROCEDURES WITHIN THE TOTAL POPULATION

A successful screening and identification program has the following characteristics: early identification, continuing search, involvement of various professionals, use of multiple resource materials, and complete study and information on the abilities of the gifted child. Too often, programs have been delayed to coincide with group testing programs or have been limited to certain grades or schools.

Often children have been identified as gifted and admitted to school early. However, such acceleration is still resisted in more than 80 percent of U.S. schools (8). Studies of early entrance in Pennsylvania, Nebraska, Massachusetts, Minnesota, and Illinois all indicate that younger children did as well as older children, were as well accepted, and suffered no apparent problems (63). As Hiskey put it, "Would that we could be assured that as many of our regular entrants would adjust and progress as well in school as the early entrants do" (63). Earlier studies by Pressey and others also strongly support acceleration (55, 56). Since no evidence to the contrary is available, it must be concluded that opposition to early entrance is based on emotion rather than fact.

Early identification and a differentiated curriculum have also been beneficial for young children. Gifted children in the usual programs make no more progress than the average, while those in programs with open access to learning show significantly better academic and

social gains (39). Gifted children should be identified and planned for as early as possible. The time of school entry is crucial for young children whose attitudes, motivation, and future learning will be shaped by their early experiences.

Successful identification must be systematic and should be based on regularly scheduled search. Identification of gifted children is as important as identification of other children with special needs and should be part of the regular responsibilities of school psychologists and personnel. Testing on Saturdays, holidays, or during the summer is a questionable practice for a number of reasons, including family schedules and professional ethics. The gifted should be regarded as important an in-school responsibility as other children, and work with them should go on during the regular school schedule.

For full identification, many sources should be consulted, and the total program should be planned so that duplication or waste of effort is eliminated. Minority groups should be represented on screening committees. The final responsibility for identification should rest with a competent school psychologist or psychometrist, or at least with a person trained to evaluate the merits or faults of various methods. This person should cooperate with a representative committee of teachers and parents. Flexibility should be maintained so that some gifted and talented children who obviously would benefit from special opportunities, but who do not quite qualify on tests, can be included.

The following forms were designed to identify gifted children:

State of Minnesota
Department of Education
Division of Instruction
Elementary and Secondary Section

Mrs. Mary M. Pilch
Consultant for the Gifted

Minimum Criteria for an Effective Identification Programs of Talented and Gifted Students

Giftedness in children is not easily recognized. Many attributes or facets of giftedness seldom or never appear in toto in any one child. Moreover, the patterns of combination of patterns of aptitudes, skills, or abilities that make up giftedness are many and varied. Potentialities may exist but not be realized. Recognition, therefore, must be attempted through many different media and by a variety of procedures.

When a school sets out to identify its talented and gifted students, it is actually embarking on a "sorting-out" process. This is a factor that can have profoundly important consequences for the students. Much of the anxiety held by responsible personnel undertaking the identification process may be allayed if certain basic ground rules are followed. It also is helpful to have a reference list of the characteristics which can be identified through subjective appraisals. It is to these two objectives that these criteria have been listed below. Schools will find them practicable and adaptive.

I. Basic ground rules

A. Diagnosis of the child's abilities must be a continuous process planned to be carried on over a period of several years. Included

in this procedure should be the following:

1. Repeated testing

2. Repeated appraisals through a meaningful marking system

3. Fresh yearly judgments which have been made by teachers, counselors, and other personnel who have had close contact with the student during the year

4. Attendance records

Note: There are significant reasons why repeated testing and subjective appraisal are necessary.

   a. At any given age level, a test score may be invalid for one reason or another.

   b. The teacher may be mistaken in her judgment of the student's potential.

   c. Emotional or environmental factors may obscure the actual ability of the student at the time he is being tested or judged.

   d. The many unknowns about individual abilities which we have not yet fathomed may eventually reveal high potential.

B. Appraisals of talent and giftedness must be based on many kinds of significant evidence gathered from a vareity of acceptable sources.

   1. Intelligence tests

      a. Group

      b. Individual

   2. Educational achievement tests

   3. Scholastic aptitude tests

   4. School marks

   5. Rating scales

   6. Anecdotal records

   7. Personality tests

8. Interest inventories

9. Reports and appraisals from counselors, deans, and others who have had frequent personal contact with the student

C. Appraisals must take into account certain non-intellectual factors which affect intellectual performance.

1. Motivation

2. Interests

3. Emotional maturity

4. Social growth

5. Personality development

6. Health

II. Characteristics which may be identified through observations and appraisals

1. Powers of concentration

2. Independent thinking

3. Versatile use of mental processes

4. Perseverance in intellectual endeavors

5. Desire to learn

6. Mastery of basic skills

7. Excellent command of language, precocity in using words and sentences

8. Creative imagination and resourcefulness

9. Alertness and great responsiveness; great sensitivity to various objects in the immediate environment

10. Organizes information

11. Varied interests

12. Curiosity
13. Grasps abstract generalizations
14. Has insights
15. Retentive
16. Extreme rapidity in learning and remembering
17. Ability to tell a story
18. Tendency to reproduce accurately the correct sequence of happenings during an excursion or event
19. Cooperative
20. Quality of participation in school activities
21. Leadership
22. Peer judgment
23. Parental observations

State Department of Education -- Hartford, Connecticut

Summary of Legal Provisions

Section 10-76 of the Connecticut General Statutes makes it permissive for local and regional school districts to provide reimbursable special instructional and supportive services for pupils with extraordinary learning ability and/or outstanding talent in the creative arts. The town or regional board of education may do this individually or in cooperation with other school districts. To be reimbursable, plans for providing such special education must be approved in advance by the State Department of Education. Reimbursement based on an excess-cost concept is explained in Section VII of

the 1972 General Guidelines for Special Education Programs.*

Definition of Terms

"Extraordinary learning ability" is deemed to be the power to learn possessed by the top five percent of the students in a school district as chosen by the special education planning and placement team on the basis of (1) performance on relevant standardized measuring instruments or (2) demonstrated or potential academic achievement or intellectual creativity.

"Outstanding talent in the creative arts" is deemed to be that talent possessed by the top five percent of the students in a school district who have been chosen by the special education planning and placement team on the basis of demonstrated or potential achievement in music, the visual arts, or the performing arts.

Identification Procedures

The responsibility for the identification of eligible pupils rests with the superintendent of schools or an employee of the school district to whom he may delegate this responsibility. Such identification should be based on a study of all available evidence as to the pupil's ability and potential made by personnel qualified to administer and interpret appropriate standardized tests, judge demonstrated ability and potential, and recognize outstanding talent in the creative arts.

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*General Guidelines for Special Education Programs - Section 10-76 a-10-76q of the General Statutes. State Department of Education, Bureau of Pupil Personnel and Special Educational Services, Hartford. 1972.

Evidence as to a pupil's extraordinary learning ability and/or outstanding talent in the creative arts must be satisfactory to the Secretary of the State Board of Education.

Items of evidence in the intellectual category should include the following:

A. Very superior scores on appropriate standardized tests. Criteria for "very superior" might be the upper two or three percent of an appropriate criterion group or scores which are at least two standard deviations above the mean.

B. Judgments of teachers, pupil personnel specialists, administrators, and supervisors who are familiar with the pupil's demonstrated and potential ability.

Additional items of evidence used in the creative arts category should include:

A. Evidence of advanced skills, imaginative insight, intense interest and involvement.

B. Judgments of outstanding talent based on appraisals of specialized teachers, pupil personnel specialists, experts in the field and/or others who are qualified to evaluate the pupil's demonstrated and potential talent.

The procedures have been designed to avoid arbitrary cut-off points or limitations. The identification process should identify a small percentage of pupils with extraordinary ability and outstanding talent whose needs are such that they cannot be met in the regular school program.

What Identification Does and Does Not Accomplish

Identification does identify a population of children who possess highly advanced, complex ability. It does serve to alert teachers to the true potential of individuals and helps them to plan more effectively

for the gifted than would be the case without identification. Identification also has proved of value for older children who have not been aware of their abilities and who have been poor achievers or problem students. Parents who have been informed of their children's high abilities, particularly those of limited means, have often been able to encourage children in their learning and education.

Schools with effective counseling programs have been able to help gifted young people to take advantage of financial support and to qualify for admission to the best colleges and universities. In some cases people from the community have come to the support of bright and deserving young people, to their mutual benefit.

Identification per se does not improve learning. Children who are identified and placed in regular programs show no change (7, 29). Identification does not change home conditions. Studies of successful and unsuccessful gifted persons have shown that achievement by the gifted is affected by factors other than high ability, including health, motivation, and opportunities afforded by home and school (75). Identification cannot reduce the impact of malnutrition, restricted learning opportunities, poor parent-child relationships, lack of interpersonal communication, and other negative factors. But if a well-planned program reduces these or other deficits, performance and achievement of a gifted child will considerably improve. Evidence to this effect has been found in studies with children at varying ages (27, 39).

Next Steps

Whatever the status of a community or State gifted program, it should be developed with the purpose of following a comprehensive identification program by complete educational planning. The traits and qualities of the gifted (p. 20 to 26) should provide bases for planning educational programs in all communities wherever the gifted are found. Crash programs or piecemeal programs limited to certain age levels, to specific topics, to limited schedules, or to certain ethnic or socioeconomic groups should be avoided. The goal should be excellent education for every gifted and talented American, regardless of age, sex, economic circumstances, location, or ethnic group. To accomplish this, we have to develop better methods of identifying potential abilities in all groups. Meanwhile, we have to make use of existing means.

But these efforts will prove fruitful only if followed by carefully planned provisions. The next step is program implementation. Schools should provide a setting in which children with the highest abilities can develop without restraint. Opportunities to pursue special interests in depth and develop a variety of abilities should be available without the constraints of scheduled programming, time limits, or confinement to a single classroom. The freedom to learn and achieve freely in all areas is of paramount importance to the gifted. Opportunities to write, compose, build, invent, analyze ideas, debate issues, produce creatively, and examine environmental and social problems should be open to these children.

In good schools, many of these opportunities are available. School is not as narrowly restricted as many critics claim. Good things are happening, both in school and under school auspices in the community, as Kaplan shows in Providing Programs for the Gifted and Talented: A Handbook

REFERENCES

1. Bachtold, L. M. Counseling Instructional Programs for Intellectually Gifted Students. Project Talent I. Sacramento: State Department of Education, 1966.

2. Barbe, W. B., and Horn, R. A. One in a Thousand--A Comparative Study of Moderately and Highly Gifted Elementary School Children. Columbus: State Department of Education, 1964.

3. Barron, F. "The Measurement of Creativity." In Handbook of Measurement and Assessment in Behavioral Sciences, edited by Whitla, D. K. Menlo Park: Addison Wesley 1968.

4. Beeman, G. "A Comparative Study of the WISC and Stanford-Binet with a Group of More Able and Gifted 7-11 Year Old Children." Presentation to California Association of School Psychologists, 1960. Mimeographed.

5. Bloom, B. S. (Ed.) Stability and Change in Human Characteristics. New York: John Wiley & Sons, 1964.

6. Blumenfeld, W. S. Research Report on Selecting Talented Negro Students: Nominations vs. Test Performance. Evanston: National Merit Scholarship Corporation, 1969.

7. Borg, W. R. An Evaluation of Ability Grouping. Cooperative Research Project No. 577, U.S. Office of Education, 1964.

8. Braga, J. L. "Early Admission: Opinion vs. Evidence." Elementary School Journal, 72 (1972).

9. Bransford, L. "Mental Retardation and the Mexican American." Paper presented at Regional Training Program To Serve the Bilingual Bicultural Exceptional Child, 1972.

10. Bruch, C. B. Pro-Cultural Measurement: The Use of the Abbreviated Binet for the Disadvantaged. Athens: University of Georgia, March, 1973. Mimeographed.

11. Buros, O. K. (Ed.) The Seventh Mental Measurements Yearbook. Highland Park, N. J.: The Gryphon Press, 1972.

12. Butcher, Harold J. Human Intelligence: Its Nature and Assessment. London: Methuen, 1968.

13. Crockenberg, S. B. "Creativity Tests: A Boon or Boondoggle for Education." Review of Educational Research, 42 (1972): 27-45.

14. Davis, A. "The Education of Culturally Deprived Children." Presentation of California State Department of Education, Compensatory Education Section. Mimeographed. No date.

15. Flanagan, J. C., and Cooley, W. W. Project Talent One-Year Follow-Up Studies. Pittsburgh, Pa.: University of Pittsburgh, 1966.

16. Flaugher, R. L., and Rock, D. A. Patterns of Ability Factors Among Four Ethnic Groups. Project Access Report No. 5. Princeton, N. J.: Education Testing Service, 1972.

17. France, K. "Effects of 'White' and of "Black' Examiner Voices on IQ Scores of Children." Developmental Psychology, 8 (1973): 144.

18. Galdieri, A. A., and others. "The Effect of Verbal Approval upon the Performance of Middle-and Lower-Class Third-Grade Children on the WISC." Psychology in the Schools, 9 (1972): 404-408.

19. Gallagher, J. J. Research Summary on Gifted Child Education. Springfield, Ill.: State Department of Public Instruction, 1966.

20. Gillooly, W. B., and Thomas, C. L. The Effects of Familiarization on the Verbal Intelligence Test Performance of Socially Disadvantaged Youth. New Brunswick, N. J.: Rutgers State University, 1970.

21. Gloss, G. Sputnik Plus Ten. Columbus, Ohio: Ohio State Department of Education, 1969.

22. Goslin, D. A. The Search for Ability. New York: Russell Sage Foundation, 1963.

23. Gowan, J. C., and Bruch, C. B. The Academically Talented Student and Guidance. Guidance monograph series. Boston: Houghton Mifflin Co., 1971.

24. Greenberg, J.W. "Caution and Creativity as Correlates of Achievement in Disparate Social-Racial Groups." Journal of Negro Education, 41 (1972): 377-82.

25. Guilford, J. P. The Nature of Human Intelligence. New York: McGraw-Hill, 1967.

25a. Guilford, J. P., and others. "The Structure of Intellect Test: Code Name CT." Beverly Hills, Sheridan Psychological Services, 1971.

26. Hall, J. C., and Chansky, N. M. "Relationships between Selected Ability and Achievements Tests in an Economically Disadvantaged Negro Sample." Psychological Reports, 28 (1971): 741-42.

27. Hess, R. D. "Class and Ethnic Influences upon Socialization." In Manual of Child Psychology, edited by Mussen, P. 3rd edition. Vol. II. New York: John Wiley & Sons, 1970.

28. Hunt, J. M. Intelligence and Experience. New York: Ronald Press, 1961.

29. Jacobs, C. Formal Recognition of Mentally Superior Children: Its Effect on Achievement and Achievement Motivation. Palo Alto: Ph. D. dissertation, Stanford University, 1959.

30. Jacobs, J. C. "Effectiveness of Teacher and Parent Identification of Gifted Children as a Function of School Level." Psychology in the Schools, 8 (1971): 140-42.

31. Jenkins, M. D. "Case Studies of Negro Children of Binet IQ 160 and Above." Journal of Negro Education, 12 (1943): 159-166.

32. Jenkins, M. D. "The Upper Limit of Ability among American Negroes." In Educating the Gifted: A Book of Readings, edited by French, J. L. Rev. ed. New York: Holt, Rinehart & Winston, 1964.

33. Jensen, A. "How Much Can We Boost IQ and Scholastic Achievement?" Harvard Educational Review, 39 (1969): 1-124.

34. Johnson, J. K. "Effects of the Process Approach upon IQ Measures of Disadvantaged Children." Illinois School Research, 7 (1971): 22-24.

35. Jones, H. E. "The Environment and Mental Development." In Manual of Child Psychology, edited by Carmichael, L. 2nd ed. New York: John Wiley & Sons, 1954.

36. Kough, J., and DeHaan, R. Teacher's Guidance Handbook. Chicago: Science Research Associates, 1955.

37. Lucito, L. Creativity Traits. Atlanta: Georgia State University, 1972. Unpublished manuscript.

38. Marland, S. P. Education of the Gifted and Talented. 2 vols. Washington: U.S. Government Printing Office, 1971.

39. Martinson, R. A. Educational Programs for Gifted Pupils. Sacramento: California State Department of Education, 1961.

40. Martinson, R. A. "Children with Superior Cognitive Abilities." In Exceptional Children in the Schools, edited by Dunn, L. M. 2nd. ed. New York: Holt, Rinehart, and Winston, 1973.

41. Martinson, R. A., and Wiener, J. The Improvement of Teaching Procedures with Gifted Elementary and Secondary School Students. Final report, 1968, Project No. 6-1244, U.S. Office of Education. Mimeographed.

42. Meyers, C. E. "Can Piaget's Theory Provide a Better Psychometry?" In Proceedings, Second Annual UAP Conference: Piagetian Theory and the Helping Professions. Los Angeles: Children's Hospital, University Affiliated Program, 1972.

43. Miller, L. M. (Ed.) Guidance for the Underachiever with Superior Ability. Washington: U.S. Department of Health, Education and Welfare, 1961.

44. Newland, T. E. "Psychological Assessment of Exceptional Children and Youth." In Psychology of Exceptional Children and Youth, Edited by Cruickshank, W. A. 3rd ed. Englewood Cliffs, N.J.: Prentice-Hall, 1971.

45. Newland, T. E. The Blind Learning Aptitude Test. Final Report, February, 1969, Project No. 6-1928, U.S. Office of Education.

46. Oakland, T. D., and others. "A Comparison of Performance on the WPPSI, WISC and SB with Preschool Children: Companion Studies." Journal of School Psychology, 9 (1971): 144-49.

47. O'Keefe, R., and others. "Influences of Age, Sex, and Ethnic Origin on Goodenough-Harris Drawing Test Performances by Disadvantaged Preschool Children." Perceptual and Motor Skills 33 (1971): 708-10.

48. Olive, H. "The Relationship of Divergent Thinking to Intelligence, Social Class, and Achievement in High-School Students." Journal of Genetic Psychology, 121 (1972): 179-86.

49. Orpet, R. E., and Meyers, C. E. "Six Structures of Intellect Hypotheses in Six-Year-Old Children." Journal of Educational Psychology, 57 (1966): 341-346.

50. Pegnato, C. W. An Evaluation of Various Initial Methods of Selecting Intellectually Gifted Children at the Junior High School Level. Ed. D. dissertation, Pennsylvania State University, 1955.

51. Pegnato, C. W., and Birch, J. W. "Locating Gifted Children in Junior High Schools: A Comparison of Methods." Exceptional Children, 25 (1959): 300-304.

52. Plaut, R. L. Blueprint for Talent Searching. New York: National Scholarship Fund for Negro Students, 1957.

53. Plaut, R. Searching and Salvaging Talent among Socially Disadvantaged Populations. New York: National Scholarship Service Fund for Negro Students, 1963.

54. Plowman, P., Rice, J., Sato, I., and others. Education of Mentally Gifted Minors. Sacramento: California State Department of Education, 1971.

55. Pressey, S. L. Educational Acceleration: Appraisals and Basic Problems. Columbus, Ohio: Ohio State University Press, 1949.

56. Pressey, S.L. "Fordling Accelerates: Ten Years After." Journal of Counseling Psychology, 14 (1967): 73-80.

57. Psychological Corporation "Test Service Bulletin." The Identification of the Gifted. New York: Psychological Corporation.

58. Quay, L. C. "Negro Dialect and Binet Performance in Severely Disadvantaged Black Four-Year-Olds." Child Development, 43 (1972): 245-50.

59. Reissman, F. "School Culture, Learning Culture, and the Cognitive Style of the Disadvantaged." Speech delivered at Training Program for Mobilization of Youth Staff, 1962.

60. Renzulli, J. S. "Talent Potential in Minority Group Students." Exceptional Children, November, 1971.

61. Renzulli, J. A., Hartman, R. K., and Callahan, C. M. "Teacher Identification of Superior Students." Exceptional Children, November, 1971.

62. Resnick, R. J., and Entin, A. D. "Is An Abbreviated Form of the WISC Valid for Afro-American Children?" Journal of Consulting and Clinical Psychology, 31 (1971): 97-99.

63. Reynolds, M. C. (Ed.) Early School Admission for Mentally Advanced Children: A Review of Research and Practice. Washington, D. C.: Council for Exceptional Children, 1962.

64. Richards, J. M., Cline, V. B., and Needham, W. E. "Creativity Tests and Teacher and Self Judgments of Originality." Journal of Experimental Education, 32 (1964): 281-85.

65. Robeck, M. C. Acceleration Programs for Intellectually Gifted Pupils. Project Talent III. Sacramento: State Department of Education, 1968.

66. Roe, A. The Making of a Scientist. New York: Dodd, Mead, 1953.

67. Rohwer, E. D., Jr. "Learning Race, and School Success." Review of Educational Research, 41 (1971): 191-211.

68. Rohwer, W. D., Jr. "Socioeconomic Status, Intelligence, and Learning Proficiency in Children." Paper presented at annual meeting of American Psychological Association. San Francisco, 1968.

69. Schubert, J., and Cropley, A. J. "Verbal Regulation of Behavior and IQ in Canadian Indian and White Children." Developmental Psychology, 7 (1972): 295-301.

70. Shannon, D. C. "What Research Says About Acceleration." Phi Delta Kappan, 39 (1957): 70-73.

71. Sheldon, W. D., and Manolakes, G. "Comparison of the Stanford-Binet, Revised Form L, and the California Test of Mental Maturity (S-Form)." Journal of Educational Psychology, 45 (1954).

72. South, Jean-Anne. "Gifted Children among Minority Groups: A Crying Need for Recognition." Top of the News, 28 (1971): 43.

73. Stallings, C. Gifted Disadvantaged Children. Technical paper, National Leadership Institute, Teacher Education/Early Childhood. Storrs: University of Connecticut, March, 1972.

74. Stallings, C., and Malone, C. Stallings' Environmentally Based Screen. San Diego: United States International University, 1973. Mimeographed.

75. Terman, L. M., and Oden, M.H. The Gifted Group at Mid-Life. Genetic Studies of Genius, Vol. 5. Palo Alto: Stanford University Press, 1959.

76. Torrance, E. P. "Are the Torrance Tests of Creative Thinking Biased Against or in Favor of 'Disadvantaged' Groups?" Gifted Child Quarterly, 15 (1971): 75-80.

77. Torrance, E. P. "Can We Teach Children To Think Creatively?" Journal of Creative Behavior, 6 (1972): 114-141.

78. Torrance, E. P. "Psychology of Gifted Children and Youth." In Psychology of Exceptional Children and Youth, edited by Cruickshank, W. A. 3rd ed. Englewood Cliffs, N. J.: Prentice-Hall, 1971.

79. Vernon, P. E. "Creativity and Intelligence." Educational Research, 6 (1964): 163-90.

80. Vernon, P. E. Intelligence and Cultural Environment. London: Methuen, 1965.

81. Voyat, G., and Silk, S. "Cross-Cultural Study of Cognitive Development on the Pine Ridge Indian Reservation." Pine Ridge, S. D.: The Pine Ridge Research Bulletin, 11 (1970).

82. Wallach, M. A. "Creativity." In Manual of Child Psychology, edited by Mussen, P.H. 3rd ed. New York: Wiley, 1970.

83. Wallach, M. A. "Intelligence Tests, Academic Achievement, and Creativity." Impact of Science on Society, 21 (1971).

84. Wallach, M., and Kogan, N. Modes of Thinking in Young Children: A Study of the Creativity-Intelligence Distinction. New York: Holt, Rinehart & Winston, 1965.

85. Wallach, M., and Wing, C. The Talented Student. New York: Holt, Rinehart & Winston, 1968.

86. Walsh, J. F., and D'Angelo, R. "IQs of Puerto Rican Head Start Children on the Vane Kindergarten Test." Journal of School Psychology, 9 (1971): 173-76.

87. Walton, G. Identification of Intellectually Gifted Children in the Public School Kindergarten. Los Angeles: University of California, 1961. Doctoral dissertation.

88. Wasik, B. H., and Wasik, J. L. "Performance of Culturally Deprived Children on the Concept-Assessment Kit--Conservation." Child Development, 42 (1971): 1586-90.

89. Williams, R. L. The BITCH-100: A Culture-Specific Test. St. Louis, Mo.: Washington University, 1972.

90. Worcester, D. The Education of Children of Above Average Mentality. Lincoln: University of Nebraska Press, 1956.

91. Yamamoto, K. "Role of Creative Thinking and Intelligence in High School Achievement". Psychological Reports, 14 (1964): 783-89.

92. Yater, A. C., and others. "Goodenough-Harris Drawing Test and WPPSI Performance of Disadvantaged Preschool Children." Perceptual and Motor Skills, 33 (1971): 967-70.

93. Zirkel, A. "Self-Concept and Disadvantage of Ethnic Group Membership and Mixture." Review of Educational Research, 41 (1971).

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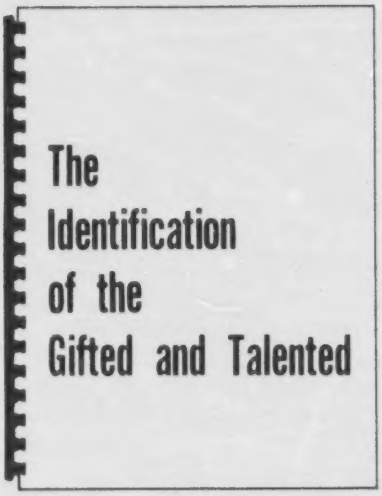

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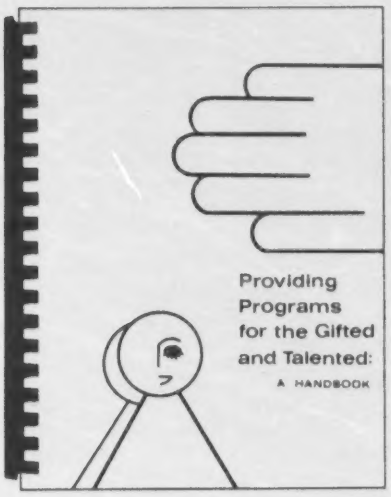

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